



STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNICIPALITY • UMASIPALA • MUNISIPALITEIT

Ref no.3/4/1/5

2024-08-14

NOTICE OF A SPECIAL MEETING OF THE COUNCIL OF STELLENBOSCH MUNICIPALITY WEDNESDAY, 2024-08-14 AT 09:00

TO

The Speaker, Cllr Q Smit [Chairperson]
The Executive Mayor, Ald GMM Van Deventer
The Deputy Executive Mayor, Cllr JS Fasser
The Council Whip, Cllr P Crawley

COUNCILLORS

RA Adams	NM Mkhontwana
J Andrews	NR Ndalasi
Ald JC Anthony	L Nkamisa
ZJ Dalling	M Nkopane
MM Danana	N Ntsunguzi
JA Davids	N Olayi
I De Taillerfer	GA Petersen
R Du Toit	WC Petersen
A Ferns	RO Pheiffer
E Groenewald	WF Pietersen
AJ Hanekom	MG Rataza
RB Hendrikse	Ald JP Serdyn
J Joon	MJ Slabbert
O Jooste	SR Schäfer
X Kalipa	A Tomose
N Mananga-Gugushe	RB Van Rooyen
C Manuel	M Van Stade
EP Masimini	CA Van Wyk
NE Mcombring	E Vermeulen
XL Mdemka	J Williams
RA Adams	NM Mkhontwana

Notice is hereby given in terms of Section 29, read with Section 18(2) of the *Local Government: Municipal Structures Act, 117 of 1998*, as amended, that a **SPECIAL MEETING** of the **COUNCIL** of **STELLENBOSCH MUNICIPALITY** will be held via **MS TEAMS** on **WEDNESDAY, 14 AUGUST 2024** at **09:00** to consider the items on the Agenda.

SPEAKER
CLLR Q SMIT

A G E N D A
SPECIAL MEETING OF THE COUNCIL
OF STELLENBOSCH MUNICIPALITY
2024-08-14

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1.	OPENING AND WELCOME
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2.	COMMUNICATION BY THE EXECUTIVE MAYOR
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3.	COMMUNICATION BY THE SPEAKER
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4.	COMMUNICATION BY THE MUNICIPAL MANAGER
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5.	DISCLOSURE OF INTERESTS
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6.	APPLICATIONS FOR LEAVE OF ABSENCE
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7.	STATUTORY MATTERS
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8.	REPORTS BY THE MUNICIPAL MANAGER
8.1	LANDOWNER CONSENT FOR THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION ASSOCIATED WITH THE PROPOSED FRANSCHHOEK SKYTRAM DEVELOPMENT IN MONT ROCHELLE NATURE RESERVE

Collaborator No: 15/10
 IDP KPA Ref No: Valley of Possibility
 Meeting Date: 14 August 2024

1. SUBJECT: LANDOWNER CONSENT FOR THE APPLICATION FOR ENVIRONMENTAL AUTHORISATION ASSOCIATED WITH THE PROPOSED FRANSCHHOEK SKYTRAM DEVELOPMENT IN MONT ROCHELLE NATURE RESERVE

2. PURPOSE

To acquire Council's approval for granting consent for the assessment and application, undertaken in terms of the National Environmental Management Act (107 of 1998), for the proposed Franschhoek Skytram development partially located within Mont Rochelle Nature Reserve.

3. DELEGATED AUTHORITY

Council of Stellenbosch Municipality.

4. EXECUTIVE SUMMARY

The development and related operation of an above ground cableway and associated amenities (Franschhoek Skytram) on Erf 1466, Erf 1467 (Haute Cabrière Wine Estate) and the Remainder of Erf 23 (Mont Rochelle Nature Reserve), Franschhoek, is currently being assessed.

Doug Jeffery Environmental Consultants (Pty) Ltd. was appointed by the applicant, the Franschhoek Cableway Company (Pty) Ltd, as independent Environmental Assessment Practitioner (EAP) to apply for Environmental Authorisation in terms of the National Environmental Management Act (107 of 1998 [NEMA]) and the Environmental Impact Assessment (EIA) Regulations. Various specialist reports have been generated along with a Pre-Application Basic Assessment Report that has been advertised by the developer for public input.

As Mont Rochelle Nature Reserve is municipal property, Stellenbosch Municipality's consent is required to enable the applicant to proceed with the the above process in terms of NEMA. The applicant also requires Stellenbosch Municipality's consent as Management Authority of Mont Rochelle Nature Reserve, which is declared a protected area in terms of the National Environmental Management: Protected Areas Act (57 of 2003 [NEM:PA]).

5. RECOMMENDATIONS

It is recommended that:

- a) The Municipal Manager be authorized to provide consent to Franschhoek Cableway Company (Pty) Ltd. in order for the latter to apply for Environmental Authorization in terms of the National Environmental Management Act (107 of 1998);

- b) The Municipal Manager be authorized to consent to the acknowledgement required in terms of Section 50 of the National Environmental Management: Protected Areas Act (57 of 2003); and
- c) Stellenbosch Municipality's comment on the Basic Assessment Report (compiled in terms of the National Environmental Management Act [107 of 1998]) be submitted to Council for consideration and approval prior to being submitted to Doug Jeffery Environmental Consultants (Pty) Ltd.

6. DISCUSSION / CONTENTS

6.1. Background

The development of the Franschhoek Skytram on Haute Cabrière wine estate and Mont Rochelle Nature Reserve, Franschhoek, is currently being assessed.

Doug Jeffery Environmental Consultants (Pty) Ltd. was appointed as independent EAP to apply for Environmental Authorisation in terms of NEMA. The latter process have not formally commenced and is in an pre-application phase. A draft Basic Assessment Report will be published in the coming months on which the municipality will be providing comment.

The cableway, should it be approved, would be the second of its kind in South Africa after the globally recognised Table Mountain Cableway in Cape Town.

Haute Cabrière wine estate on Lamprechts Road in Franschhoek has been identified as the preferred location for the lower (base) station, with Middagkransberg in the Mont Rochelle Nature Reserve as the preferred location for the upper (top) station.

6.2 Discussion

Stellenbosch Municipality is not the authority that will decide on the above assessment and application being conducted in terms of NEMA. The competent authority in this regard is the Department of Forestry, Fisheries and the Environment (DFFE). Stellenbosch Municipality is the landowner of Erf 23, Mont Rochelle Nature Reserve and the Management Authority of Mont Rochelle Nature Reserve declare in terms of NEM:PA.

For the above application to proceed the applicant, Franschhoek Cableway Company (Pty) Ltd, requires Stellenbosch Municipality's consent as landowner (Annexure 1) and Management Authority (Annexure 2).

6.3. Financial Implications

This item has no financial implications for the Municipality. All costs associated with the relevant NEMA assessment and application is for the applicant's account.

6.4. Legal Implications

Stellenbosch Municipality is not the authority that will decide on the above assessment and application being conducted in terms of NEMA. The competent authority in this regard is the Department of Forestry, Fisheries and the Environment. Stellenbosch Municipality is the landowner of Erf 23, Mont Rochelle Nature Reserve. It is also the Management Authority of the reserve declare in terms of NEMPA.

Stellenbosch Municipality will be providing consent for the said assessment and application to be undertaken.

If the top base station is to be built on municipal land a decision must be made as to whether this land will be leased to the company or if there will be a subdivision and selling of that property. Either way an information statement will have to be published if long term rights will be provided on the council land.

6.5 Staff Implications

This report has no additional staff implications to the Municipality.

6.6 Previous / Relevant Council Resolutions:

There are no previous Council Resolutions in this regard.

6.7 Risk Implications

Risks are addressed in the content of the item.

Signing the attached consent merely allows Franschhoek Cableway Company (Pty) Ltd. to conduct the required assessment of the proposed development and submit the relevant application in terms of NEMA. Stellenbosch Municipality will provide formal comment and input as part of the legislated public participation process that forms part of the NEMA process.

Should Environmental Authorization be issued by the DFFE, Stellenbosch Municipality would become the competent authority on the submission of the relevant land use and building plan applications as well as any related infrastructure impact.

6.8 Comments from Senior Management:

Comments already contained in the item.

6.8.1 Municipal Manager:

Supports the recommendations

Annexures

Annexure 1: Department of Forestry, Fisheries and the Environment Landowner Consent

Annexure 2: National Environmental Management Protected Areas Act (57 of 2003) Section (50) Consent

NAME	Schalk van der Merwe
POSITION	Senior Environmental Planner
DIRECTORATE	Community Services
CONTACT NUMBERS	021-808 8679
E-MAIL ADDRESS	Schalk.vandermerwe@ Stellenbosch.gov.za
REPORT DATE	2024-08-05

ANNEXURE 1



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

CONSENT FROM THE LANDOWNER / PERSON IN CONTROL OF THE LAND, ON WHICH THE ACTIVITY IS TO BE UNDERTAKEN

Submitted in terms of the requirements of sub-regulation 39(1) of the Environmental Impact Assessment Regulations, 2014 (if the applicant is not the owner or person in control of the land on which the activity is to be undertaken).

KINDLY NOTE THAT:

1. This document should be attached as Appendix 3 to: The application form for Environmental Authorization in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998).
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner ("EAP") to ascertain whether subsequent versions of the form have been released by the Department.
3. One form must be filled in per landowner.

1. DETAILS OF APPLICANT:

Project Applicant	The Franschhoek Cableway Company (Pty) Ltd.
Trading name (if any)	
Contact person	Mr Justin Truter
Physical address	
Postal address:	PO Box 1008, STELLENBOSCH
Postal code	7599
Telephone/ cell:	021 809 6000
E-mail:	jtruter@werksmans.com



Batho pele- putting people first

The processing of personal information by the Department of Forestry, Fisheries and the Environment is done lawfully and not excessive to the purpose of processing in compliance with the POPI Act, any codes of conduct issued by the Information Regulator in terms of the POPI Act and / or relevant legislation providing appropriate security safeguards for the processing of personal information of others.

CONSENT FROM THE LANDOWNER – AUGUST 2023

2. DETAILS OF LANDOWNER:

(where the applicant is not the landowner or person in control of the land)

Landowner or person in control of the land:	Stellenbosch Municipality
Contact person	Ms Geraldine Mettler
Physical address	Town House Complex Plein Street STELLENBOSCH, 7600
Postal address:	PO Box 17, STELLENBOSCH
Postal code	7600
Telephone/ cell:	021 808 8025
E-mail:	mm@stellenbosch.gov.za

3. PROJECT DETAILS AND ACTIVITIES APPLIED FOR:

Project title	The Proposed Development and Related Operation of an Above Ground Cableway and Associated Amenities on Erf 1466, Erf 1467 and the Remainder of Erf 23, Franschhoek within the Western Cape Province
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3.1. Activities applied for:

Describe each listed activity in Listing Notices 1, 2 or 3 (GNR 983 -985, 04 December 2014) which is being applied for as per the project description

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1 of the EIA Regulations, 2014 as amended	Describe the portion of the proposed project to which the applicable listed activity relates. Ensure to include thresholds/area/footprint applicable.
Not applicable.		
Activity No(s):	Provide the relevant Scoping and EIA Activity(ies) as set out in Listing Notice 2 of the EIA Regulations, 2014 as amended	Describe the portion of the proposed project to which the applicable listed activity relates. Ensure to include thresholds/area/footprint applicable.
Not applicable.		
Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 3 of the EIA Regulations, 2014 as amended	Describe the portion of the proposed project to which the applicable listed activity relates. Ensure to include thresholds/area/footprint applicable.
8	The development and related operation of above ground cableways and funiculars. i. Western Cape All areas outside urban areas.	The proposal entails the development and related operation of an above ground cableway, in the Western Cape, outside an urban area.

CONSENT FROM THE LANDOWNER – AUGUST 2023

12	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>i. Western Cape</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;</p> <p>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</p> <p>v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister.</p>	<p>The proposal entails the clearance of an area of more than 300 square metres of indigenous vegetation, in the Western Cape, within a critically endangered ecosystem listed in terms of section 52 of the NEMBA.</p>
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4. PROPERTY DESCRIPTION:

Property Description	Erf 23
Town(s) or district(s):	Franschhoek
Physical (street) address of project:	Mont Rochelle Nature Reserve, Franschhoek

CONSENT FROM THE LANDOWNER – AUGUST 2023

5. CONSENT FROM LANDOWNER OR PERSON IN CONTROL OF THE LAND TO UNDERTAKE THE ACTIVITY/IES:

I, _____ declare that I:-

1. Am the landowner or person in control of the property described in Section 4 of this document; and
2. That I hereby give consent to the applicant [The Franschhoek Cableway Company \(Pty\) Ltd.](#) as described in section 1 of this document to undertake the activity/ies as described in section 3 of this document on the property described in section 4.

 Signature of the landowner or person in control of the land

Date: _____

ANNEXURE 2



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MONT ROCHELLE NATURE RESERVE

MANAGEMENT AUTHORITY CONSENT IN TERMS OF SECTION 50(5) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (57 OF 2003)

Stellenbosch Municipality, Management Authority of the Mont Rochelle Nature Reserve, herewith confirms that:

1. It is satisfied with the scope, nature and extent of the Basic Assessment process being undertaken by Doug Jeffery Environmental in terms of the National Environmental Management Act (107 of 1998 [NEMA]);
2. The final Basic Assessment Report will be considered by Stellenbosch Municipality in due course and it will provide its comments thereon; and
3. In the event that the project receives the necessary Environmental Authorisation in terms of NEMA, as well as land use planning approval in terms of the Municipal Planning By-Law, Mont Rochelle Nature Reserve's Environmental Management Plan will be amended to accommodate the development area and associated uses.

GERALDINE LEZETTE METTLER
MUNICIPAL MANAGER

Date: _____

8.2	STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT 2 - FEASIBILITY STUDY
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Collaborator No:

IDP KPA Ref No: Sustainable Valley

Meeting Date: Special Council: 14 August 2024

1. SUBJECT: STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT 2 - FEASIBILITY STUDY

2. PURPOSE

For Council to consider the Feasibility Study report (covering the needs, technical and financial viability, legal and regulatory environment, staff implications, economic development impacts and the procurement plan for the recommended option) associated with the procurement of electricity generated from renewable sources, from one or more Independent Power Producers (IPPs)). Approval of the Feasibility Study report, and one of recommendations arising from the report, will allow the process to proceed to the procurement phase of the project.

3. DELEGATED AUTHORITY

Municipal Council.

4. EXECUTIVE SUMMARY

4.1 The Portfolio Infrastructure Services five-year plan contained within the IDP lists the Directorate: Infrastructure Services and the Department: Electrical Services as being responsible for developing alternative energy supply, and the purchasing of electricity from IPPs and the conclusion of an IPP tender as a key priority, with a target of 30% of total energy supply to be purchased from IPP's by 2027.

4.2 Further to this, the Council Meeting held on 30 March 2022 included the following statement: "Stellenbosch Municipality to commence with the investigation to generate at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers."

4.3 Before embarking on a procurement process, it was deemed necessary to conduct a feasibility study to investigate, amongst others, the technical and financial viability of technical solutions, staff implications as well as the legal and regulatory environment. The Transaction Advisor has now completed the Feasibility Study report, which is attached as **Annexure A**.

4.2 The Feasibility Study for the abovementioned project determined that the most feasible options for the Municipality to pursue are:

Option 1: Solar PV of up to 55MW_p only,

or;

Option 2A10S: Solar PV of up to 71MW_p and Battery Energy Storage System (BESS) of approximately 15MWh.

4.3 The Western Cape Government will undertake, in parallel to the above processes, a formal written Eskom confirmation and approval on Grid Capacity on the Municipality's behalf, as well as a formal written Eskom confirmation and approval on how they view aggregated supply between the Municipal Points of Supply ("PoS").

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- 4.4 Council to note that neither option (on their own) will be able to provide the required original intention of the Municipality to avert the full two stages below Loadshedding Stage 1 or 2. However each option has been selected in terms of optimum affordability for the Municipality as well as the procurement of alternative “renewable” energy in accordance with the Municipal IDP, and previous Council resolutions
 - 4.5 Council to note that the project will require a proper functioning Supervisory Control and Data Acquisition (SCADA) system, which is currently being implemented by the Municipality. Note that such a requirement is in any case a licenced requirement as well as a Grid Code requirement regardless of the addition of IPPs.
 - 4.6 Council to note that a full human personnel analysis will still need to be conducted prior to the conclusion of the procurement process

Note that while reference is made to the quantity of 55MW_p of installed PV module power, the full amount of energy received from the sun is not converted to usable AC power at the inverters (as per best practice engineering principles for solar PV system design). For this reason, the energy from the sun is shown as eg. 55MW_p but the amount of usable energy from the inverter is shown as approximately 45MW_{AC}. This size reduces the risk of the solar system producing excessive amounts of energy which cannot be absorbed by the Municipal load. If batteries are included, more sun energy can be captured and supplied to the Municipal load leading to a larger system with PV module power of approximately 71MW_p and correspondingly larger inverter capacity of approximately 59MW_{AC}. Some of the energy from this larger solar system will also be used to charge the battery. Both options are synonymous with an approximately 50MW_{AC} Municipal load requirement.

5. RECOMMENDATIONS

For consideration

- 5.1 That Council approves the Feasibility Study Report in Annexure A.
- 5.2 That Council approves the initiation of a process for the procurement of electricity energy generated from only PV Solar for a capacity, of approximately 55MW_p / 45MW_{AC} in total, for the Stellenbosch Municipal Area as per Option 1 in Table 3 under paragraph 6.2.7.1

Or

- 5.2 That Council approves the initiation of a process for the procurement of electricity energy generated from a combined PV Solar and Battery Storage with a Solar capacity of approximately 71MW_p / 59MW_{AC} in total, as well as a Battery Energy Storage System with a capacity of approximately 15MWh in total, for the Stellenbosch Municipal Area as per Option 2A 10 S in Table 3 under paragraph 6.2.7.1.
- 5.3 That the procurement process bid invitation documents include a customised Power Purchase Agreement (PPA) and the process aligns with the requirements of Chapter 11, and Section 33 of the MFMA, the bid invitation documents to be prepared with the support of the Transaction Advisor Team.
- 5.4 That Council approves that the maximum contracted Solar capacity of the Project as stated in paragraph 5.2 may be reduced to account for the outcome of the current tender B/SM 60/24 (20MW) IPP plant, should it be successfully concluded and awarded.

5.5 That Council take note of the dependencies in the Feasibility Study report, such as a successful award of the contract being contingent upon the Western Cape Government obtaining confirmation from Eskom on Grid Capacity and aggregated supply between the Municipal Points of Supply ("PoS").

5.6 That Council agrees that an Expression of Interest (EOI) may be requested from the Public prior to the final bid invitation documents being published.

6. DISCUSSION / CONTENTS

6.1 Discussion

The Municipality has been prioritised as the first municipality to implement one of the Pioneering Projects that form part of the Western Cape MER Initiative which was initiated by the WCG. In March 2022, the Stellenbosch Municipal Council approved a resolution to proceed with the Stellenbosch Municipal Independent Power Producer Procurement Programme (MIPPPP) (the Project).

To implement the Pioneering Project, the Western Cape Government (WCG) Department of Infrastructure (Department) appointed a Transaction Advisor (the Cresco Advisory Consortium) and Project Manager (Pegasys) to facilitate the successful conclusion of a long-term Power Purchase Agreement ("PPA") between the Municipality and one or more IPPs (the Project).

In conducting the feasibility study to investigate the technical and financial viability of technical solutions for the Project as well as the legal and regulatory environment, we have applied best practice and taken account of relevant statutes and regulations, which will also serve to provide context for engagement with key stakeholders, and for the considerations that will have to be applied by the Municipal Council when it makes a final decision on the Project. The core objective of the feasibility study is to test whether the Project, in its recommended form:

- is consistent with the Municipality's legal obligations, development plans and strategic imperatives;
- will be affordable for the Municipality during the Project term;
- is technically feasible;
- identifies and mitigates all material risks in relation to the Project as far as possible; and
- will not have unintended adverse consequences for the Municipality or the local community.

6.2 The Feasibility Study report covers the following sections:

6.2.1 Needs Analysis –

The Needs Analysis has considered the Project's alignment with the Municipality's Strategy and approach to energy resilience as well as the WCG Provincial Strategic Plan and other strategy documents.

The Municipality's IDP is the Municipality's principal five-year strategic plan that deals with the most critical development needs of the municipal area (external focus) as well as the most critical governance needs of the organisation (internal focus). The IDP touches on energy resilience in a number of areas that include the following strategic goals:

- 'Ensure access to affordable, reliable, sustainable, and modern energy for all', which speaks to the Municipality's strategy in respect of energy resilience.
- 'Take urgent action to combat climate change and its impacts' speaks to the drive towards greener energy sources.
- 'Produce sufficient energy to support the industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third.'
- The Portfolio Infrastructure Services five-year plan contained within the IDP lists the Directorate: Infrastructure Services and the Department: Electrical Services as being responsible for developing alternative energy supply, and the purchasing of electricity from IPPs and the conclusion of an IPP tender as a key priority, with a target of 30% of total energy supply to be purchased from IPP's by 2027.

Further to this, the Council Meeting held on 30 March 2022 included the following statement: "Stellenbosch Municipality to commence with the investigation to generate at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers."

The Needs Analysis concluded that the Project is aligned with the strategic objectives of the Municipality. A detailed stakeholder management plan was also developed to guide the Municipality in engaging with key stakeholders during the various Project development processes.

6.2.2 Options Analysis – this section identified possible technical solutions, which included detailed technical and financial assessments per technical option identified. Technical solutions included various configurations of Solar PV only; and Solar PV and Battery Energy Storage System (BESS) as discussed below:

Option 1A/B/C – Solar PV only solution (considering different sizing, points of connection, wheeling from outside of the municipal border and operation under a loadshedding and no loadshedding scenario).

Summarised Outcome: Option 1 and its permutations resulted in the highest Net Present Value (NPV) saving in cost of supply and proved to be the optimal financial solution. However, a Solar PV only option may not contribute to the reduction of unserved energy (customer demand that cannot be supplied due to e.g., load shedding supply reduction) as the Solar PV plant(s) would need to be offline during load shedding.

Option 2A/B – Solar PV and BESS assuming the Municipality is a loadshedding customer (considering different sizing; points of connection; and operation under a loadshedding and no loadshedding scenario).

Summarised Outcome: Option 2A/B reduced the unserved energy (load shedding) from an assumed base of 7.8% to between 0.09% and 0.23%. Option 2A/B however resulted in a negative NPV impact given low utilisation levels (batteries substantially used for dispatch during load-shedding) and high capital cost associated with the addition of batteries.

Option 3A/B – Solar PV and BESS assuming the Municipality is a load curtailment customer (considering different sizing; points of connection and operation under load curtailment, instead of load-shedding).

Summarised Outcome: Option 3A/B reduced the unserved energy from an assumed base of 7.8% to between 1.57% and 1.91%. Option 3A/B however resulted in a negative NPV impact given low utilisation levels and high capex cost associated with the addition of batteries.

Option 2A 10S – Solar PV and BESS at a reduced size - An additional option was evaluated with a reduced BESS size (10 MWh for the Stellenbosch supply point) to evaluate to what extent a smaller BESS could reduce unserved energy, but still be within acceptable financial parameters.

Summarised Outcome: This option reduced the unserved energy as a result of load shedding from an assumed base of 7.8% to 3.93%. This option provides NPV savings under the current Megaflex tariff structure and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex. A further sensitivity analysis was run for this option to ascertain the outcome under a no loadshedding scenario, which provided savings under both the current Megaflex and MunicFlex tariff structures.

In summary, based on the outcome of the comparative technical and financial analysis, only Option 1A/B/C (Solar PV plant without BESS) and Option 2A10S (Solar PV with reduced BESS size) is recommended as viable as per the Table 1 below:

Table 1: Recommended Options - Maximum Contracted Capacity for the Project

Technology	*Maximum Contracted Capacity (Total from all Supply Points)
Option 1A/B/C: Solar PV only	Approximately 55 MW _p / 45 MW _{AC}
OR	
Option 2A10S: Solar PV and BESS	Approximately 71 MW _p / 59 MW _{AC} Approximately 7.5 MW / 15 MWh

**The minimum individual IPP project sizes making up the maximum contracted capacity for the Project will be determined during the procurement phase*

An important consideration would be how the Municipality's other initiatives, specifically the Tender: 'B/SM 60/24 Request for Proposal (RFP) from Independent Power Producers to Provide 20MWP Renewable Energy to Stellenbosch Municipality' ("B/SM 60/24 20MW Tender") impacts the maximum contracted capacity for the Project as specified in Table 1 above. No information could be shared with the Transaction Advisor in respect of the tender responses as it is still under evaluation. If the B/SM 60/24 20MW Tender proves to be successful, then the maximum contracted capacity for this Project will be reduced accordingly.

The Project will be designed to facilitate the procurement of new electricity generation capacity from either Option 1: Solar PV or Option 2A10S: Solar PV and BESS (at a reduced size), to contribute towards the strategic objectives of the Municipality. The Municipality is required to make a decision as to their preferred option.

6.2.3 Legal Assessment – the legal assessment included a detailed analysis of the legislation and regulations that are applicable to the Project and assesses whether these present any major obstacles for successful project implementation. Key approvals, procedures and other requirements that may impact the planning, procurement and implementation stages of the Project, have been noted for consideration during the Project procurement and contracting process. It is envisaged that the Municipality will enter into a long-term Power Purchase Agreement (PPA) with one or more IPP's constituting a long-term financial commitment(s) on the part of the Municipality. As such, Municipal Council approval will be required in terms of section 33 of the MFMA before entering into these contracts.

6.2.4 Economic Development Assessment - this section considered the potential socio-economic development measures that could be incorporated as part of the procurement process. The following measures have been prioritised for their suitability to this Project, for the benefit of the local community:

- Creating employment in the construction programme and power plant operations;
- Spend on skills development of historically disadvantaged individuals; and
- Social spending (i.e., building specified social infrastructure for local community benefit and spend on social well-being programmes).

It is recommended that these socio-economic development measures be incorporated as a condition of award/ contractual obligation.

It is also recommended that the Municipality should apply its current preference points system to the bid evaluation for this Project. Specifically, the Municipality should award a maximum of 10 points for the B-BBEE Level of the bidder. A 90/10 preference points evaluation system is envisaged since the estimated total value of the 20-year PPA will exceed R50 million.

6.2.5 Procurement Plan – the procurement plan summarised the recommended procurement solution(s), required regulatory approvals, provisional risk allocation, procurement timetable and items that would need to be resolved during the procurement process. It is also recommended that an Expression of Interest (EOI) be issued before issuing the RFP to solicit information from interested parties on project readiness and other matters including land availability which has been identified as a potential constraint to bidder participation.

6.2.6 Summary Outcome

6.2.6.1 The municipal strategic objectives are summarised in Table 2 below and considers how the recommended options in Table 1 meet these objectives:

Table 2: Assessment - Recommended Options Against the Municipal Strategic Objectives

Municipal Strategic Objectives		Option 1 A,B and C Solar PV plant only	Option 2A10S Solar PV plant + BESS Reduced size
1	Combat climate change and reduce carbon emissions	All the proposed options contribute towards combatting climate change and reducing carbon emissions.	
2	Diversification - Meeting IDP target of procuring electricity from IPPs - 30% by 2027	The maximum contracted capacity determined for the Project will contribute to this objective.	
3	Reliable Energy Supply - reduction in unserved energy as result of load shedding	This option does not contribute to reducing unserved energy	Some reduction in unserved energy (7% to 3.9%)
4	Affordability - in respect of Municipality's Balance Sheet	Lower bound guarantee requirements within balance sheet debt limits	Lower bound guarantee requirements within balance sheet debt limits
5	Affordability - in respect of impact on cost of supply and end-user tariff	Financial assessment outcome shows positive impact on Municipal Cost of Supply	Financial assessment outcome shows positive impact on Municipal Cost of Supply
6	Transferring substantial risk to private party	By virtue of the risk allocation of an IPP project structure the Municipality's risk is minimised to mainly the payment obligation (and providing a termination payment guarantee in the event of termination due to Municipality default).	

Option 1A/B/C presents a no-regret option from a financial point of view and achieves the highest NPV savings. The option however does not contribute to reducing unserved energy. Option 2A10S presents a middle ground in respect of reducing unserved energy from 7.8% to 3.93% and also results in a NPV saving, albeit lower than Option 1A/B/C.

The Municipality's view of loadshedding in the medium to long term should be considered in deciding whether to pursue Option 1A/B/C vs Option 2A10S. A battery solution can be added at a later stage if necessary. The Municipality is required to make a decision as to their preferred option.

6.2.7 Options Analysis

The objective of the Options Analysis is to identify and assess the viable technical solutions that aligns to the Municipality's strategic objectives and to assess their financial impacts and any regulatory/legal, socio economic and economic development aspects that may differ in respect of the options.

6.2.7.1 Identification of plausible options

The Options Analysis was undertaken by firstly assessing the Municipality's electricity supply network and load, and plausible technical solution options were identified as per Table 3 below.

Table 3: Overview of the Technical Solution Options evaluated

Option	Solar PV	BESS	Load Shedding vs. Curtailment	Connection Configuration
1	A	√	Load shedding	Four plants, behind-the-meter at each supply point
	A NLS	√	No Load shedding	Four plants, behind-the-meter at each supply point
	B	√	Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points
	C	√	Load shedding	One plant, connected to Eskom network, wheeling to all supply points
2	A	√	Load shedding	Four plants, behind-the-meter at each supply point
	B	√	Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points
	A NLS	√	No Load shedding	An additional scenario was modelled for option 2A where no load shedding is experienced.
	A 10S	√	Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size (only modelled for Stellenbosch supply point as a proxy for all supply points)
	A 10S NLS	√	No Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size and where no load shedding is experienced (only modelled for Stellenbosch supply point as a proxy for all supply points)
3	A	√	Load curtailment	Four plants, behind-the-meter at each supply point

Option	Solar PV	BESS	Load Shedding vs. Curtailment	Connection Configuration
B	√	√	Load curtailment	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points

6.2.7.2 Methodology and approach in assessment of the technical solution options

A technical assessment of the options was undertaken with the key objectives of a) determining the potential maximum contracted capacity b) development of energy generation profiles c) developing BESS charge and discharge profiles d) network capacity and strength (power system) studies and e) calculation of the reduction (if any) of unserved energy.

A financial assessment of the options was undertaken that considered

- a) a supply analysis
- b) the cost of supply or tariff of the options considered
- c) the impact on the blended cost of supply of the Municipality
- d) the NPV impact of the options; and
- e) the impact on the Municipal Balance Sheet.

The financial analysis also considered the potential impact of the proposed MunicFlex tariff restructure expected to be implemented in the medium term.

6.2.7.3 Comparative Technical and Financial assessment of the Options

Table 5 presents the comparative technical and financial outcomes.

Summary conclusion on the technical assessment

- For the 2022 reference year, the total amount of unserved energy due to loadshedding was 7.8% across the entire Municipality.
- Our baseline assumption for the Option 1 scenarios (i.e., PV only and the Municipality is a load shedding customer) is that the PV plants would need to be offline during load shedding. This is based on the assumption that 1.) if Eskom is conducting the load shedding, then the PV plants will not be able to operate in an islanded mode (the PV inverters are grid following and will automatically shut down when disconnected from the grid) and 2.) if the Municipality is self-load shedding, then the System Operator would not want the Municipality to rely on the Eskom network to provide the ancillary services necessary to support the Municipal network and its PV generator during load shedding. Based on these assumptions, the Option 1 scenarios do not reduce load shedding / unserved energy.
- In the case of the Option 2 scenarios, which are the load shedding reduction scenarios, the solar PV plants combined with BESS reduce the quantum of loadshedding down from 7.8% of unserved energy, to 0.09% of unserved energy for scenario 2A. For 2B, the combined solar PV plant and BESS results in 0.23% of unserved energy for the year. Note that loadshedding is not completely eliminated. However, larger solar PV plant and larger BESS capacities than those modelled will result in a higher capex cost with only marginal reduction in the unserved energy.

- In the case of the Option 2A 10S scenarios, which is the load shedding reduction scenario with a smaller battery size (10 MWh), which was only modelled for Stellenbosch supply point, the quantum of unserved energy was reduced from 7.8% to 3.93% at Stellenbosch supply point.

In the case of the Option 3 scenarios, which are load curtailment scenarios, the solar PV plant and BESS plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.91% of unserved energy for scenario 3A. For scenario 3B, which is two solar PV plants and one BESS located at Stellenbosch, the plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.57% of unserved energy.

- Note: comparing the unserved energy and hours of unserved energy between the Option 2 and Option 3 scenarios is not recommended. The Option 2 scenarios are working to service the Municipal load during hours of load shedding; and the Option 3 scenarios are working to provide a constant reduction over an extended period, to meet load curtailment requirements.
- In conclusion, the results suggest that BESS, even at a smaller size of 10 to 20MWh will have an impact on loadshedding, and if the Municipality had to procure a smaller size BESS, they would still benefit from improved security of supply, as well as improved production of renewable energy, if the BESS is coupled with a solar PV plant, which will not go offline during load shedding.

Summary conclusion on the technical assessment

In respect of the NPV assessment:

- Options 1A and 1B achieve the highest savings under the current Megaflex tariff structure (R395/MWh and R393/MWh respectively); and remain positive under the proposed MunicFlex tariff structure and a 10% tariff flex;
- Option 1C (wheeling) achieves second highest savings (R355 /MWh); and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex;
- Options 2A, 2B, 3A, and 3B are loss-making over the duration of the PPA period under the current Megaflex -, and proposed MunicFlex tariff structures;

(Note: running Option 2A under a no-loadshedding scenario (more efficient battery utilisation and using Megaflex tariff structure) still result in a negative NPV savings value, albeit smaller (-R5/MWh).)

- Option 2A10S provides savings under the current Megaflex tariff structure (R321/MWh); and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex. A further sensitivity was run for this option to ascertain the outcome under a no loadshedding scenario (Option 2A10S NLS), the latter which provided savings under the current Megaflex (R293/MWh)- and MunicFlex (R152/MWh) tariff structures.
- Finally, avoided diesel cost shown are immaterial in the context of losses associated with large batteries. However, reduced avoided cost does strengthen the business case for a smaller battery option (e.g., 2A10S).

In respect of the impact on cost of supply:

- average cost of supply reduces between 16c/kWh to 19c/kWh for variations of Options 1; while cost of supply increases between 11c/kWh to 40c/kWh for variations of Option 2 and Option 3 (with the exception of a 10c/kWh saving for both 2A10S and 2A10 NLS);
- the introduction of MunicFlex reduces overall savings of renewable energy, which accentuates savings and losses mentioned above.

Other considerations:

- It is important to note that higher Eskom tariff increases in comparison to CPI linked IPP tariff increases will see a growing gap between the average utility- and IPP tariffs; and therefore, have to be considered together with NPV savings.
- Stellenbosch Municipality indicated that above inflation energy tariff increases are not affordable for the average household; hence, technology solutions that increase the current cost of supply would be less favourable.
- The future MunicFlex rate adjustment is a key consideration for the calculation of the cost of supply.

6.2.7.4 Measurement against the Municipality's strategic objectives

The Municipality's strategic objectives and related output specifications are detailed in Table 4 below which evaluates how the options meet the objectives.

All options contribute to strategic objectives 1 and 2. From the table one can see that no one option meets all the objectives and the balance falls between reducing unserved energy vs impact on cost of supply.

Table 4 - Assessment of the Options Against the Municipal Strategic Objectives

Municipal Strategic Objectives	Option 1 A,B and C Solar PV plant only	Option 2A+B Solar PV plant + BESS Loadshedding	Option 3A+B Solar PV plant + BESS Load Curtailment	Option 2A10S Solar PV plant + BESS Reduced size
1 Combat climate change and reduce carbon emissions	All the proposed options contribute towards combatting climate change and reducing carbon emissions.			
2 Diversification - Meeting IDP target of procuring electricity from IPPs - 30% by 2027	The maximum contracted capacity determined for the Project will achieve this objective.			
3 Reliable Energy Supply - reduction unserved energy as result of load shedding	This option does not contribute to reducing unserved energy	Based on the sizing Option 2 offers greatest impact on reducing unserved energy	Reduction in unserved energy, however not as much as Option 2	Some reduction in unserved energy (7% to 3.9%)
4 Affordability - in respect of Municipality's Balance Sheet	Lower bound guarantee requirements within balance sheet debt limits	Financial Analysis indicates the option is not affordable as it increases the blended cost of supply and has a negative NPV impact.	Financial Analysis indicates the option is not affordable as it increases the blended cost of supply and has a negative NPV impact.	Lower bound guarantee requirements within balance sheet debt limits
5 Affordability - in respect of impact on cost of supply and end-user tariff	Financial assessment outcome shows positive impact on Municipal Cost of Supply			Financial assessment outcome shows positive impact on Municipal Cost of Supply under the Megaflex tariff structure.
6 Transferring substantial risk to private party	By virtue of the risk allocation of an IPP project structure the Municipality's risk is minimised to mainly the payment obligation (and providing a termination payment guarantee in the event of termination due to Municipality default).			

AGENDA

SPECIAL COUNCIL MEETING

2024-08-14

Table 5 - Summary outcome of the technical and financial analysis undertaken

Evaluation of Options	Option 1 (Solar PV Only)			Option 2 (Solar + BESS)			Option 2 (Solar + Small BESS)		Option 3 (Solar + BESS)	
Criteria	Imbedded	Imbedded	Wheeled	Loadshedding	Loadshedding	No Loadshedding	Loadshedding	No Loadshedding	Load Curtailement	Load Curtailement
	1A	1B	1C	2A	2B	2A NLS	2A10S	2A10S NLS	3A	3B
Technical outputs										
PV Size (MWp)	34.2MWp (S) + 8.7MWp (C) + 7.9MWp (F) + 1.4MWp (P) = 52.1 MWp total	55MWp	52.1 MWp	47.6MWp (S) + 11.6MWp (C) + 9.7MWp (F) + 1.8MWp (P) = 70.7MWp total	71.3MWp	71.3MWp	47.6MWp	47.6MWp	37.5MWp (S) + 13.1MWp (C) + 10.7MWp (F) + 1.8MWp (P) = 63.1MWp total	66.6MWp
BESS Size (MW/MWh)	No BESS	No BESS	No BESS	50/100 (S) + 15/30 (C) + 10/20 (F) + 2/4 (P) = 77/154 total	55/110	55/110	5/10	5/10	25/100 (S) + 7.5/30 (C) + 5/20 (F) + 1/4 (P) = 38.5/154 total	37.5/150
Substation	All	All	All	All	All	Stellenbosch	Stellenbosch	Stellenbosch	All	All
% PV Curtailment	10%	10%	6.3%	10%	10%	9.9%	10%	9.7%	10%	10%
% Unserved Energy	7.8%	7.8%	7.8%	0.09%	0.23%	n/a	3.93%	n/a	1.91%	1.57%
% Reduction of eskom consumption	28%	31%	32%	39%	43%	44%	39%	39%	34%	36%
Financial Considerations										
Sizing considered in Financial Model	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing
Energy Sold (MWh/annum)	351 211	351 211	351 211	380 237	380 004	380 790	361 235	380 790	373 529	374 805
Total Generation (MWh/Annum)	120 335	127 131	128 183	176 294	142 615	123 590	111 026	111 026	144 394	150 812
2023/24 Cost of Supply (R/kWh)	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
2023/24 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.75	1.75	1.75	1.74	1.74	1.74	1.75	1.74	1.74	1.73
2024/25 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.98	1.98	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.95
2024/25 IPP Cost of Supply (R/kWh)	0.95	0.95	0.90	2.16	2.31	2.31	1.19	1.22	2.62	2.37
2024/25 Blended Cost of Supply IPP & Eskom (R/kWh)	1.79	1.79	1.82	2.26	2.23	2.07	1.87	1.85	2.36	2.26
2024/25 (Reduction)/Increase (c/kWh)	(19)	(19)	(16)	30	27	11	(10)	(11)	40	31
2024/25 NPV Savings - Current Tariff Structure (R/MWh)	395	393	355	(150)	(149)	(-5)	321	293	(368)	(211)
Debt Ratio (36 month guarantee)**	48.0%	49.0%	48.0%	83.0%	77.0%	70.0%	50.0%	51.0%	83.0%	80.0%
Debt Ratio (12 month guarantee)**	37.6%	37.9%	37.7%	48.8%	46.7%	44.8%	38.4%	38.5%	48.7%	47.8%
2024/25 Municflex (Cost of Supply- Drakenstein Excl)	1.94	1.94	1.94	1.90	1.90	1.90	1.92	1.90	1.91	1.90
2024/25 MunicFlex Blended Cost of Supply IPP & Eskom (R/kWh)	1.86	1.86	1.89	2.34	2.29	2.14	1.92	1.89	2.43	2.34
2024/25 MunicFlex (Reduction)/Increase (c/kWh)	(8)	(8)	(5)	44	39	24	-	(1)	52	44
NPV Savings - Proposed MunicFlex (R/MWh)	257	249	166	(284)	(291)	-	192	152	(503)	(359)

*36 months future IPP revenue buyer default termination guarantee

** norm: 45%

6.2.7.5 Conclusion of the comparative analysis of the technical solution options

Based on the outcome of the technical and financial analysis, we conclude that Option 1A/B, being an embedded solar PV plant/s without BESS provides the optimal financial impact, however it may not contribute to reducing unserved energy. It is also noted that the large batteries (e.g., Options 2A/B and 3A/B) required for significant loadshedding reduction, are not economical (with due consideration of the profit benefit associated with lower unserved energy), given low utilisation levels (batteries substantially used for dispatch during load-shedding) and high capex cost. A smaller battery, as modelled in Option 2A10S, can provide savings, as well as some contribution to reducing unserved energy. It also provides savings under a no-loadshedding scenario.

The Municipality's view of loadshedding in the medium to long term should be considered in deciding whether to pursue Option 1A/B/C vs Option 2A10S. A battery solution can be added at a later stage if necessary. The Municipality is required to make a decision as to the preferred technical solution to be procured and to provide their approval for the continuation of the Project to the procurement phase, with the support of the TA Team on this basis as per Resolution 5.4.

6.2.8 Economic Development Assessment

The Municipality's current approach to awarding preference points for specific goals considers B-BBEE level and locality: at least 50 percent for the B-BBEE contributor status level of the tenderer and a maximum of 50 percent for the location of the business offices of the tenderer.

It would be administratively simple to apply the Municipality's approach to preference points to this Project. However, it would likely do little to promote meaningful, broad-based socio-economic benefit or help mitigate local community risk. Furthermore, it would be unwise to ignore the precedents set by South Africa's REIPPPP.

There are three options available to address the limitations of Stellenbosch's preference scoring and to mitigate local community risk in this Project: 1) amend the Municipality's Preferential Procurement Policy to make provision for creating an expanded preference scoring system for this Project; 2) use "objective criteria" related to socio-economic development in the assessment of bid responses; and 3) include contractual obligations related to socio-economic development as a condition of bid award.

The outcome of a pros and cons assessment for each of the abovementioned three options preferred utilising contractual obligations related to socio-economic development. The pros and cons relate to a) impact on the procurement process and future contract management; b) likely behaviour by bidders; c) possible influence on the electricity tariff; and d) socio-economic development impact.

To determine the socio-economic development obligations, assessment criteria were applied to ten common socio-economic development measures. The following measures have been prioritised for their suitability to this Project, for the benefit of the local community:

Table 7 – Recommended socio-economic development measures

Socio-economic development measure	Contractual obligation	Relevant conditions
Job creation for local community members.	40% of total person months in the construction phase. 50% of total person months in the operating phase.	"Local community" is defined as verified residents of the Local Municipality in which the Project is located. This definition can be expanded in the following instances: in the event the Project site straddles the demarcated boundary of two Local Municipalities, or

		there is a second adjacent Local Municipality that incorporates a human settlement that reasonably could impact or be impacted by the Project.
Skills development spending to improve the employability of local community members.	0.2% of the total 20-year PPA revenue.	To be spent on internships and bursaries related to post-secondary school education and training – for local community members.
Social spending to improve the quality of life of the local community.	0.8% of the total 20-year PPA revenue.	To be spent on social well-being programmes and social infrastructure in the local community. The latter can only be made within the Stellenbosch Municipal boundary, and must be approved and appear in the Stellenbosch Municipality IDP to qualify.

It is recommended that these socio-economic development measures be incorporated as a condition of award/ contractual obligation. It is estimated that these measures, as envisaged, will have a negligible impact on the electricity tariff i.e., 1 cent per kWh.

It is recommended that the Municipality should apply its current preference points system to the bid evaluation for this Project. Specifically, the Municipality should award a maximum of 10 points for the B-BBEE Level of the bidder. A 90/10 preference points evaluation system is envisaged since the estimated total value of the 20-year PPA will exceed R50 million.

6.2.9 Procurement Plan

6.2.9.1 Technical Solution to Procure

The Project will be designed to facilitate the procurement of new generation capacity from either Option 1: Solar PV or Option 2A10S: Solar PV and BESS (reduced BESS size), to contribute towards the strategic objectives of the Municipality. The Municipality is required to make a decision as to their preferred option as per resolution 5.4. Table 8 below presents the maximum contracted capacity for purposes of the Project.

Table 8 - Recommended Options - Maximum Contracted Capacity for the Project

Technology	*Maximum Contracted Capacity (Total from all Supply Points)
Option 1A/B/C: Solar PV only	~ 55 MW _p / 45 MW _{AC}
OR	
Option 2A10S: Solar PV and BESS	~ 71 MW _p / 59 MW _{AC} ~ 7.5 MW / 15 MWh

*The minimum individual IPP project sizes making up the maximum contracted capacity for the Project will be determined during the procurement phase

An important consideration would be how the Municipality's other initiatives, specifically the B/SM 60/24 20MW Tender, may impact the maximum contracted capacity for the Project. If the B/SM 60/24 20MW Tender proves to be successful, then the maximum contracted capacity for this Project in Table 8 above will be reduced accordingly.

6.2.9.2 Items to consider during the procurement phase:

The following items will need to be considered during the procurement phase that will inform the minimum size of individual IPP projects making up the maximum contracted capacity of the Project and the points of supply:

- Formal Eskom confirmation on Grid Capacity;
- Formal Eskom confirmation on how they view aggregated supply between the Municipal Points of Supply (“PoS”)
- Land availability, bidder readiness and time required to obtain necessary approvals - it is recommended that the Municipality issue an EOI (which has already been drafted by the TA Team) to gather information from the market in respect of potential project sizes, location and readiness to participate in the intended procurement process.
- Impact of the B/SM 60/24 20MW Tender on the Project.

The following are preparatory activities that the Municipality will have to undertake in anticipation of the procurement and operational phases of the Project:

- Grid connections - the Municipality will need to consider how it will manage approaches from potential bidders in respect of connecting their projects to the Municipal grid.
- Control Measures - the Municipality will need to investigate and implement the necessary control measures to ensure it is able to dispatch any generation plant based on any local or Eskom grid requirements.

6.3 Legal Implications

6.3.1 Legislation and regulations applicable to the Project

- The purpose of this assessment was to determine which legislation and regulations are applicable to the Project, and whether the applicable legislation and regulations have different consequences for the different technical solutions considered for the Project.
- The legal assessment also considers whether the requirements of applicable legislation and regulations present any major obstacles or risks to Project procurement and implementation.
- Finally, the legal assessment identifies key approvals, procedures and other requirements, which impact on the planning, procurement and implementation of the Project, so that those can be considered in the Project procurement and contracting process.

6.3.2 Key Legal and regulatory questions considered

Below is a summary of the key legal and regulatory questions that arose in relation to the feasibility phase of the Project, and conclusions on these questions. These questions address the applicability of the key legal requirements which bind or affect the Municipality, both in regard to the procurement phase and thereafter, during contract finalisation, and the consequences of those requirements for the Project design and the timing / sequencing of the process. The questions below are only those that are deemed critical to note, however other questions were considered in the Feasibility Study.

- The procurement of electricity by the Municipality from one or more IPPs does not entail the delivery of “municipal services” through an external mechanism, as contemplated in the Municipal Systems Act. Therefore, the requirements set out at section 76 of the Municipal Systems Act and in the following sections are not applicable to the Project.

- If the Project is designed so that the Municipality only purchases electricity (and possibly services which are ancillary thereto) from IPPs which bid for the opportunity, for the term of the PPA, the Project will not constitute a PPP. The key reason for this conclusion is that the IPPs in this scenario will not be performing municipal functions on behalf of the Municipality. As such, section 120 of the MFMA, read with the Municipal Public-Private Partnership Regulations, is not applicable to the Project.
- Even if one or more IPP generation facilities were situated on Municipal-owned land, that would not automatically make the Project a PPP. Only if the Municipality requires such generation facilities to be located on specific Municipal-owned land, and requires the generation facility to be constructed, funded, commissioned and operated for the Municipality, is there a possibility that the Project would be considered a PPP. This is not the case.
- Although the Municipal PPP Regulations are not applicable, relevant sections of the MFMA and the Municipal SCM Regulations are applicable to the procurement process, which will entail competitive bidding. In addition, the Municipality's SCM Policy and its Preferential Procurement Policy will be applicable.
- It is not necessary for the Minister of Mineral Resources and Energy to issue a determination in terms of section 34 of the Electricity Regulation Act (ERA), as a pre-condition for the Project to proceed. The Municipality can initiate the Project and procure the new generation capacity based on its own assessment of the need and the feasibility thereof.
- As long as the Project is procured on the Municipality's own initiative and not pursuant to a section 34 Ministerial determination, the Electricity Regulations on New Generation Capacity (NewGen Regulations) issued in terms of ERA are not applicable to the Project. The reason for this is that "new generation capacity" in the NewGen Regulations is defined as generation capacity procured pursuant to a section 34 determination.
- National Treasury Circular No 118 was issued to give guidance to municipalities on the interpretation and consequences of the NewGen Regulations, where applicable to municipal IPP procurement. Circular No 118 is not directly applicable to the Project or binding on the Municipality but provides useful guidance on best practice in municipal IPP procurement. To date, the steps taken by the Municipality in relation to the Project are consistent with the preparatory steps outlined in Circular No 118, for projects that fall within Scenario 2.
- Based on the current Schedule 2 of ERA, it appears that IPPs which are successful in the Municipality's Project procurement process will not require a generation licence issued by NERSA. Depending on where the generation facilities are located, they will be exempt from both licensing and registration by NERSA under item 2 of Schedule 2, or exempt from licensing but required to register under item 3 of Schedule 2 of ERA.
- The contracts which result from the Project procurement process will result in long-term financial commitments on the part of the Municipality. Therefore, Municipal Council approval will be required in terms of section 33 of the MFMA. Section 33 approval should be sought towards the end of the procurement process, or at least after the RFP has been issued, when the PPAs and associated agreements are in near-final form. To the extent that the public participation component of the section 33 approval process can be aligned with the Municipality's IDP process, this opportunity should be pursued.

- It will be prudent, and has become best practice in IPP procurement processes, to issue largely non-negotiable draft agreements along with the RFP, for purposes of indicating to prospective bidders what the intended commercial terms of the transaction will be, and the respective risk allocation between the parties. The draft agreements will also, to the extent relevant, include any socio-economic development obligations imposed as contract terms by the Municipality.
- There are no regulatory restrictions in the NRS 048-9, the Municipality's Distribution Licence, or the Electricity Supply Agreements, that would require consultation with or permission from Eskom for the establishment of an embedded generation facility in the Municipality's licensed area. However, it should be noted that embedded generators connected to the distribution system will still have to comply with the specifications and obligations set out in the various distribution Grid Codes.
- Even though Eskom consent is not required by law, Eskom (or its successor NTCSA) as the System Operator has the ultimate responsibility for overall system stability and is empowered to take appropriate measures in an emergency to mitigate any risk to grid stability. Also, Eskom is and will remain the principal supplier of electricity to the Municipality, and there have apparently been ongoing engagements between Eskom and the Municipality on amendments to, or replacement of the existing Electricity Supply Agreements for the Stellenbosch area. Therefore, it would be prudent for the Municipality to continue engaging with Eskom on the Project and the potential impact of the Project on grid stability in the Western Cape, to obtain Eskom's support.
- The legal landscape surrounding the approval of project pricing for IPPs and the regulation of fees, charges, and tariffs by the NERSA is multifaceted and subject to ongoing developments. While IPPs exempted from licensing under the ERA will not be subject to NERSA approval for PPA pricing, the Municipality is required to obtain NERSA approval, on an annual basis, of its electricity tariffs for municipal services, including electricity. Recent legal developments underscore the necessity for a cost-reflective methodology in tariff approval processes.

The recommendations in the feasibility study report, as reflected herein, comply with Council's procurement policies and all applicable legislation. It should be noted that although the purchase of electricity from IPPs, by buyers in both the public and private sectors, is well-established, municipal IPP procurement programmes are novel and certain aspects of the regulatory regime for implementation of such programmes are confusing. The legal conclusions reflected in the feasibility study report and the recommendations made, are based on ordinary principles of legal interpretation and relevant case law. To the extent reasonably possible, the Municipality's standard documents will be applied in the procurement phase, but the PPA will be customised to conform to established commercial principles and risk allocation, and the Municipality's specific circumstances.

6.4 Financial Implications

The premise (or risk allocation) of the Project is that the Municipality will purchase electricity generated by one or more IPPs on a take or pay basis at a fixed price per kWh as bid by the bidder, which will escalate with CPI over the term of the PPA (with a term that is typically 20 years). The IPP is responsible for the design, finance, construction and operation of the electricity generation facility. The Project, if implemented, is estimated to generate first electricity 18 to 24 months after reaching commercial close (i.e., signing the PPA after receiving Municipal Council approval in terms of section 33 of the MFMA) which will be the first direct financial implication of the Project to the Municipality. The Feasibility Study report shows that the two

recommended options would yield an NPV saving to the Municipality, meaning that the cost of purchasing energy from IPPs is expected to be lower than the cost of purchasing electricity from Eskom (i.e., not increasing the Municipality's electricity cost).

In addition to the monthly purchase commitment, the PPA will have a contingent liability in the form of a buyer termination guarantee of between 12 and 36 months of future IPP revenue. The feasibility study has shown that lower bound guarantee requirements can be absorbed within the municipality balance sheet debt limits. The guarantee value is subject to bankability requirements and will be included in the draft PPA, which will form part of the RFP documentation.

6.5 Staff Implications

It must be noted that the Municipality has identified the impact of human capital for the operation of the control room for remote switching purposes. All the staff requirements that were identified for this specific purpose was to gear the municipality for self loadshedding, should Eskom approval be granted to the municipality as a self loadshedding customer.

The feasibility study did not provide an outcome of human capital that would be required for the successful implementation for a project of this nature (50 MW)

6.6 Previous / Relevant Council Resolutions:

"40TH COUNCIL MEETING: 2021-01-27: ITEM 11.5.1

RESOLVED (nem con)

- (a) *that Council approves the investigation into alternate methods of electricity generation and purchases;*
- (b) *that Council approves the joint investigation to be done by University of Stellenbosch, Council for Scientific and Industrial Research (CSIR), and the Western Cape Government;*
- (c) *that Council accepts the initiating of the following processes as may be required:*
 - i. *Municipal Systems Act, Section 78(1) processes*
 - ii. *Municipal Finance Management Act, Section 33 investigation processes*
 - iii. *Electricity Regulation Act, Section 13; and*
- (d) *that Council considers the funding of such investigations and implementation of completed investigations within the determination of the 2021/22 budget process.*

3RD COUNCIL MEETING: 2022-03-30: ITEM 11.5.1

RESOLVED (nem con)

- (a) *that Council notes the investigation launched by the Western Cape Government, Municipal Electricity Resilience Initiative Attached as **ANNEXURE A**;*
- (b) *that Council notes the two Pioneering Projects proposed for Stellenbosch Municipality namely:*
 - i) *Pioneering Project 2: Stellenbosch Municipality Solar PV project*
 - ii) *Pioneering Project 5: Joint Municipality Generation Project*

- (c) *that in terms of Pioneering Project 2, Council approves the setting up and issuing of a Request for Proposals (RFP) tenders to call for proposals from suppliers, to build multiple generating facilities and supply electricity to Stellenbosch up to a combined level of 51MW;*
- (d) *that all relevant process works as prescribed by Section 34 of the Electricity Regulation Act, Act 4 of 2006, as well as associated regulations, as amended, be commenced with up to the level prescribed, in addition to those already commenced with by the CSIR;*
- (e) *that, after further deliberation with the MER team and participating municipalities, a further report be submitted to Council to report on the feasibility and legal framework of Pioneering Project 5 where a number of Municipalities is proposed to jointly establish a process to purchase electricity from one or a number of Independent Power Producers; and*
- (f) *that it be endeavoured to also purchase electricity to cover the daily, weekly and seasonal requirements of Stellenbosch Municipality in its objective to be able to reduce the necessity to Load Shed during periods of reduced supply from Eskom*

6.7 Risk Implications

Risks such as sufficient electricity supply and proper funding balancing are being mitigated.

6.7.1 Risk of Electricity Purchase costs

Should the Eskom Tariff rise as recently predicted within the media, the Municipality would be challenged to ensure an affordable service to its customer. By reducing the prices of the electricity purchased, the risk of the onward sales of electricity can be reduced.

6.7.2 Risk of Severe Impact of Loadshedding

Depending on the choice of Plant selection the level of loadshedding can also be reduced. By reducing the level of loadshedding, the sale of electricity is increased, and the cost of diesel decreased. The Risk of Loadshedding is therefore reduced.

6.7.3 Risk of Increased Deemed Energy Payments – The Risk that the Municipality cannot receive the energy and needs to curtail the generation plant, but still make deemed energy payments. The technical and financial modelling undertaken during the feasibility study has factored in the risk and ran sensitivities to ensure the Project remains viable under the likely parameters. In the event of excess energy being available, it is likely that excess energy will be able to be sold to other consumers and this upside has not been factored in.

6.7.4 Risk to Municipality being negatively affected when Eskom Municflex tariff is implemented – sensitivities were undertaken as part of the feasibility study to evaluate the impact under the anticipated Municflex tariff structure. The recommended option[s] still remains viable under this structure.

Inadequate addressing of the staff implications to operate a network configured to accommodate a project of this nature poses a risk to the municipality. The Directorate is in the process of preparing a list of staff requirements to implement the project, along with other Alternative Energy Generation initiatives.

The non-confirmation by Eskom whether the Municipality would be allowed to implement load curtailment or self loadshedding poses a risk to the successful implementation of the project.

- 6.7.5 **Benefit to the Municipality** The Municipality has not done its own detailed network simulation however the feasibility report confirms that the proposed options have been simulated to the advantage of the municipality and confirmation was given that the network capacity and strength (power system) studies and calculation on the proposed options were done.

6.8 Comments from Senior Management:

NOT CIRCULATED FOR COMMENTS. DISCUSSED IN DIRECTOR'S MEETING AND COMMENTS INCLUDED.

6.8.1 Municipal Manager

Council to consider the content of the report.

ANNEXURES

Annexure A: STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23 - FEASIBILITY STUDY

Annexure B: List and explanations of abbreviations and terminologies used

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REPORT DATE	1 August 2024

ANNEXURE A



ANNEXURE A:

**STELLENBOSCH MUNICIPAL INDEPENDENT
POWER PRODUCER PROCUREMENT
PIONEERING PROJECT – T008/23**

FEASIBILITY STUDY

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

Version	Description	Date Issued
V0.1	First Draft Issued	3 May 2024
V0.2	Draft 2 Updated to consider comments received up to 30 May 24 and to update information in respect of placeholders in v0.1	31 May 2024
V0.3	Updated to consider comments received up to 7 May 2024	14 June 2024
V.F	Final Draft	27 June 2024

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GLOSSARY OF TERMS

AC	Alternating Current
AFS	Annual Financial Statements
B-BBEE	Broad-Based Black Economic Empowerment
B-BBEE Act	Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003)
BESF	Battery Energy Storage Facility
BESS	Battery Energy Storage System
BEC	Bid Evaluation Committee
BSC	Bid Specification Committee
B/SM 60/24 20MW Tender	Tender: B/SM 60/24 Request for Proposal (RFP) from Independent Power Producers to Provide 20MWP Renewable Energy to Stellenbosch Municipality, meaning the tender issued by the Stellenbosch Municipality on 3 February 2024 which closed on 28 March 2024.
C&I	Commercial and Industrial
Carbon Tax Act	Carbon Tax Act, 2019 (Act No. 15 of 2019)
CBD	Central Business District
Circular No 118	National Treasury Circular No. 118, issued in terms of the MFMA
Constitution	The Constitution of the Republic of South Africa, 1996
COD	Commercial Operation Date
COGTA	National Department of Co-Operative Governance and Traditional Affairs
CoLS	Cost of Loadshedding, an economic measure of the cost of loadshedding
COS Study	Cost of Supply Study
COUE	Cost of Unserved Energy, an economic measure of the cost of unplanned electricity interruptions to electricity customers.
CPI	Consumer Price Inflation
CRSES	Centre for Renewable and Sustainable Energy Studies
CSIR	Council for Scientific and Industrial Research
DEDAT	Western Cape Government's Department of Economic Development and Tourism
Department	Western Cape Government's Department of Infrastructure
DMRE	National Department of Mineral Resources and Energy
dtic	Department of Trade Industry and Competition
EAF	Energy Availability Factor
ED	Economic Development
EIMP	Updated Municipal Electricity Master Plan

Electricity Supply Agreements	Agreements entered into between Stellenbosch and Franschhoek Municipalities and Eskom, in 1995 and 2000 respectively.
EMEs	Emerging Micro Enterprises
EPR	Energy Projects Report 1 November 2021 (prepared as part of the WCG MER Initiative Phase 1)
ERA	Electricity Regulation Act, 2006 (Act No. 4 of 2006)
ERA Bill	Electricity Regulation Amendment Bill (B23-2023)
ERP	WCGs Energy Resilience Programme, a suite of projects being undertaken by various departments in the WCG
Eskom	Eskom Holdings SOC Limited
G4J	Growth for Jobs
GCCA 2025	Generation Connection Capacity Assessment of the 2025 Transmission Network
GHG	Greenhouse Gases
GHG Emissions	Emission of greenhouse gases
GHI	Global Horizontal Irradiance, meaning the total solar radiation incident on a horizontal surface.
GWh	Gigawatt-hour
ICS	Inclusive Carbon Standard
IDP	Stellenbosch Municipality Integrated Development Plan, 2022-2027
IGCAR	Interim Grid Capacity Allocation Rules
IPP	Independent Power Producer
IPS	Interconnected Power System
IRP	Integrated Resource Plan
2019 IRP	The currently operational IRP, published in 2019
2023 draft IRP	A proposed Integrated Resource Plan, 2023
kW	kilowatt
kWh	Kilowatt hour
LC	Letter of Credit
LCOE	Levelised Cost of Electricity
Load Curtailment	Load reduction obtained from consumers who are able to reduce demand on instruction or through the application of load switching or load limiting
Loadshedding	Load reduction obtained by disconnecting load at selected points on the transmission or distribution system
LNG	Liquefied Natural Gas

Lyners	Neil Lyners & Associates (RF) (Pty) Ltd
MD	Maximum Demand, meaning the highest level of electrical power consumption during a specific period of time.
Megaflex	means that ToU electricity tariff charged by Eskom to its urban customers with a notified maximum demand of greater than 1 MVA
MEnMP	Municipal Energy Master Plan
MER	Western Cape Municipal Energy Resilience
MFMA	Local Government: Municipal Finance Management Act, 2003 (Act No. 56 of 2003)
Minister	Minister of Mineral Resources and Energy
MIPPPP	Municipal Independent Power Producer Procurement Programme
MoU	Memorandum of Understanding
MSCM Regulations	Municipal Supply Chain Management Regulations, 2005, issued in terms of the MFMA
Municipal Structures Act	Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998)
Municipal Systems Act	Local Government: Municipal Systems Act, No. 32 of 2000
Municipality	Stellenbosch Municipality
MunicFlex	Local-authority large power user tariffs, Megaflex, Miniflex, Nightsave Urban, Ruraflex, and Nightsave Rural to be combined into a new tariff called MunicFlex
MV	Medium Voltage
MVA	Megavolt-amperes
MW	Megawatt
MWh	Megawatt hour
MWp	Megawatt peak
NCC	National Control Centre
NDCs	Nationally Determined Contributions
NECOM	National Energy Crisis Committee
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NERSA	National Energy Regulator of South Africa
NewGen Regs	Electricity Regulations on New Generation Capacity, 2011, issued in terms of the ERA
NMD	Notified Maximum Demand, meaning the maximum contractual electricity demand that a customer requests from a utility under its electricity supply agreement.

NPV	Net Present Value
NRS 048-9	Code of Practice – Load Reduction Practices, System Restoration Practices and Critical Load and Essential Load Requirements Under Power System Emergencies, Edition 3
NSP	Network Service Providers
President	President Cyril Ramaphosa
POC	Point/s of Connection
PoS	Point/s of Supply
PPA	Power Purchase Agreement
PPB	Public Procurement Bill
PPB 2023	Public Procurement Bill 2023
PPP	Public Private Partnership
PPP Regulations	Municipal Public-Private Partnership Regulations, 2005, issued in terms of the MFMA
PPPFA	Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000)
PPR	Pioneering Projects Roadmap
PPR 2022	Preferential Procurement Regulations, 2022
Province	Western Cape Province
PSC	Project Steering Committee
PSP	Western Cape Government's Provincial Strategic Plan, 2019 to 2024
PV	Photovoltaic
RDP	Reconstruction and Development Programme
RECs	Renewable Energy Certificates
REDZs	Renewable Energy Development Zones
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
Registration Procedure	Registration Procedure applied by NERSA for activities which are exempt from licensing requirements in terms of Schedule 2 of the ERA but still required to register with NERSA
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualification
RTE	Round Trip Efficiency, also known as AC/AC efficiency, refers to the ratio between the energy supplied to the storage system (measured in MWh) and the energy retrieved from it (also measured in MWh). This efficiency is expressed as a percentage (%).
RVC	Rapid Voltage Change

SALGA	South African Local Government Association
SAPVIA	South African Photovoltaic Industry Association
SAWEA	South African Wind Energy Association
SCM	Supply Chain Management
SDBIP	Stellenbosch Service Delivery Budget Implementation Plan
SDF	Spatial Development Framework
SMEs	Small and Medium Enterprises
SO	System Operator, Eskom
SO Grid Code	System Operator Grid Code
SoC	State of Charge, quantifies the remaining capacity available in a battery at a given time, measured in MWh or as a % of total storage capacity.
SONA	State of the Nation Address
SS	Substation
SSEG	Small Scale Embedded Generation
Systems Act	Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000)
TA	Transaction Advisory
TA Team	The Cresco Advisory Consortium (comprising Cresco Advisory, Edward Nathan Sonnenbergs Inc, ED Platform, Osmotic Engineering Group and Turner & Townsend)
ToU	Time of Use
TS	Transmission system
Unserved Energy	Unserved Energy is a measure of the amount of customer demand that cannot be supplied due to a shortage of generation, demand-side participation or interconnector capacity
WCG	Western Cape Government

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Stellenbosch Municipality (**“the Municipality”**) has been prioritised as the first municipality to implement one (1) of the Pioneering Projects that form part of the Western Cape Municipal Energy Resilience (**“MER”**) Initiative which was initiated by the Western Cape Government (**“WCG”**). In March 2022, the Stellenbosch Municipal Council approved a resolution to proceed with the Stellenbosch Municipal Independent Power Producer Procurement Programme (**“Stellenbosch MIPPPP”** or **“the Project”**).

On 28 July 2023, an open tender was advertised by the WCG’s Department of Infrastructure (**“Department”**) for transaction advisory support to the Department and the Municipality for the next three (3) years, to facilitate the successful conclusion of a long-term Power Purchase Agreement (**“PPA”**) between the Municipality and one (1) or more Independent Power Producers (**“IPPs”**). Pursuant to the tender process, the Cresco Advisory Consortium (comprising Cresco Advisory, Edward Nathan Sonnenbergs Inc, ED Platform, Osmotic Engineering Group and Turner & Townsend) (**“TA Team”**) was appointed on 12 October 2023 as Transaction Advisor to support the implementation of the Stellenbosch MIPPPP.

Before embarking on a procurement process it is good practice and a critical first step to conduct a feasibility study to investigate the technical and financial viability of technical solutions as well as the legal and regulatory environment. In doing so, we have taken account of relevant provisions of the statutes and regulations for developing this feasibility study report, which will also serve to provide context for engagement with key stakeholders, and for the considerations that will have to be applied by the Municipal Council when it makes a final decision on the Project. The core objective of the feasibility study is to test whether the Project, in its recommended form:

- is consistent with the Municipality’s legal obligations, development plans and strategic imperatives;
- that it will be affordable¹ for the Municipality during the Project term;
- that it is technically feasible;
- that all material risks in relation to the Project are identified and mitigated as far as possible; and

¹ ‘Affordable’ will be tested against the Municipality’s ability to meet its financial obligations should it enter into an agreement as result of the Project. This will also consider affordability to pass through increases in electricity tariffs to end users.

- that it will not have unintended adverse consequences for the Municipality or the local community.

The feasibility study report has been structured to cover the following sections: a) Needs analysis b) Options Analysis (Technical Solution Option identification – Technical Assessment and Financial / Value Assessment of the options) c) Legal Assessment d) Economic Development Assessment e) Procurement Plan including recommended procurement solution.

1.2 NEEDS ANALYSIS

1.2.1 ALIGNMENT WITH MUNICIPAL STRATEGIC OBJECTIVES, WESTERN CAPE GOVERNMENT AND NATIONAL GOVERNMENT POLICIES

The Needs Analysis has considered the Project's alignment with the Municipality's Strategy and approach to energy resilience as well as the WCG Provincial Strategic Plan and other strategy documents.

The Municipality's Integrated Development Plan ("**IDP**") is the Municipality's principal five-year strategic plan that deals with the most critical development needs of the municipal area (external focus) as well as the most critical governance needs of the organisation (internal focus). The IDP touches on energy resilience in a number of areas that include the following strategic goals:

- 'Ensure access to affordable, reliable, sustainable, and modern energy for all' which speaks to the Municipality's strategy in respect of energy resilience.
- 'Take urgent action to combat climate change and its impacts' speaks to the drive towards greener energy sources.
- 'Produce sufficient energy to support the industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third.'
- The Portfolio Infrastructure Services five-year plan contained within the IDP lists the Directorate: Infrastructure Services and the Department: Electrical Services as being responsible for developing alternative energy supply, and the purchasing of electricity from Independent Power Producers ("**IPPs**") and the conclusion of an IPP tender as a key priority, with a target of 30% of total energy purchased to be purchased from an IPP by 2027.

The IDP stated that a Municipal Energy Master Plan ("**MEEnMP**") has been launched, which will form the basis of where electricity is likely to be generated or purchased. The MEEnMP completed does favour procuring energy from solar PV but does not conclude on Battery Energy Storage System ("**BESS**") solutions. It states that when compared to the Cost of

Unserved Energy (“**COUE**”) at R93.00/kWh², even if taken at 10% of this value there is a strong case for BESS and recommends that further studies be undertaken to unpack these possibilities. Additionally, it is recommended in the MEnMP that the Municipality should engage with the System Operator as to what is permissible during loadshedding.

The IDP clearly contemplates that the Municipality will pursue procuring power from IPPs and as such this Project will fall within the strategic direction of the Municipality as recorded in the IDP.

Further to this the Council Meeting held on 30 March 2022 included the following statement: *“Stellenbosch Municipality to commence with the investigation to generate at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers.”*

The Project, if implemented, would contribute to improving the availability of supply, enabling and accelerating private investment in generation capacity, and acceleration of the procurement of new capacity from renewables and possibly BESS which is aligned with government’s policies.

1.2.2 ABILITY AND CAPACITY OF THE MUNICIPALITY TO IMPLEMENT THE PROJECT

Various support and governance structures have been put in place to promote the implementation of the Project through its phases:

- A Memorandum of Understanding (“**MoU**”) between the Municipality and the Western Cape Government’s Department of Infrastructure (“**Department**”) has been put in place where the Department has given its commitment to provide support towards the Municipality’s energy projects that are aligned to the WCGs Energy Resilience Programme.
- The Director of Infrastructure Services and the Department Electrical Services is the responsible Directorate in the Municipality to execute the Project. The Electrical Services Department has individuals with substantial electrical engineering experience. There is a vacancy in a key position being that of Manager: Operations & Maintenance that needs to be filled.

² A report prepared by Nova Economics for Eskom, dated 3 December 2020 estimates that the overall cost of load shedding is between R7.61/kWh and R9.53/kWh (in 2020 prices).

- The Department facilitated the appointment of a transaction advisor, the Cresco Advisory Consortium (TA Team), to support the Department and the Municipality for the next three (3) years.
- The Department facilitated the appointment of a Project Manager as key liaison and interface between the TA Team, the Municipality, and the Department.
- A Project Steering Committee (“**PSC**”) has been established to oversee the implementation and development phase of the Project.
- The Municipality also concluded an MoU with the University of Stellenbosch and Council of Scientific Industrial Research (“**CSIR**”) of SA to undertake several studies. The Municipality has also appointed Neil Lyners & Associates (RF) (Pty) Ltd (“**Lyners**”) to provide technical advisory services where required.

1.2.3 STAKEHOLDER MANAGEMENT

To effectively manage stakeholders and their expectations, the Municipality must manage relationships with all stakeholders identified by building trust, gathering information, provide information regarding the Project, early identification of challenges, resolving possible conflict, actively listening, and overcoming any resistance to change for the Project.

The engagement with stakeholders should take place throughout the Project lifecycle and be based on the analysis of their needs, interests and potential impact on the Project’s success.

A detailed stakeholder identification and management plan has been developed which is attached as **Annexure A**.

1.2.4 OUTPUT SPECIFICATIONS

The Needs Analysis concluded by framing the broad output specifications as outlined in **Table 1-1** that provide guidance as to the potential technical solution options to be considered in the Options Analysis.

Table 1-1 Output specification

Output Specification	Description
Technology	The Options Analysis will consider Solar PV and BESS.
Solar PV plant and BESS capacity	The Municipality, in its IDP, has set a target to procure 30% of its total energy purchased from an IPP through a competitive tender process. The Municipal Council meeting held on 30 Mar 2022 also initiated the

Output Specification	Description
	<p>investigation to consider “at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers.”</p> <p>Optimal solar PV plant size and BESS capacity to be determined through technical modelling.</p>
Commercial Operation Date	The Municipality has set a target in its IDP to procure 30% of its total energy purchased by 2027.
Point(s) of Connection	The IPP connects to the electrical grid network at points that have been deemed feasible and acceptable for interconnection.
Grid Code Compliance	Specify compliance with the South African Renewable Energy Grid Code, which includes minimum technical requirements that need to be adhered to in order to connect to the grid and operate.
Municipality Dispatch Communications/ Commands	Ability to respond to dispatch instructions from the Municipality, e.g. generation curtailment (to avoid backflow of electricity to Eskom network), generation / load set points (to provide required levels of load reduction during load shedding).

1.3 OPTIONS ANALYSIS

1.3.1 APPROACH

The objective of the Options Analysis is to identify and assess the viable technical solutions that aligns to the Municipality’s strategic objectives and to assess their financial impacts and any regulatory/legal, socio economic and economic development aspects that may differ in respect of the options.

The Options Analysis was undertaken by firstly assessing the Municipality’s electricity supply network and load, and then identifying plausible Technical Solution Options as per **Table 1-2**.

Table 1-2 Overview of the Technical Solution Options

	Option	Solar PV	BESS	Load Shedding vs. Curtailment	Connection Configuration
1	A	√		Load shedding	Four plants, behind-the-meter at each supply point
	A NLS	√		No Load shedding	Four plants, behind-the-meter at each supply point
	B	√		Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points
	C	√		Load shedding	One plant, connected to Eskom network, wheeling to all supply points
2	A	√	√	Load shedding	Four plants, behind-the-meter at each supply point
	B	√	√	Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points
	A NLS	√	√	No Load shedding	An additional scenario was modelled for option 2A where no load shedding is experienced.
	A 10S	√	√	Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size (only modelled for Stellenbosch supply point as a proxy for all supply points)
	A 10S NLS	√	√	No Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size and where no load shedding is experienced (only modelled for Stellenbosch supply point as a proxy for all supply points)
3	A	√	√	Load curtailment	Four plants, behind-the-meter at each supply point
	B	√	√	Load curtailment	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points

1.3.2 ASSESSMENT OF THE TECHNICAL SOLUTION OPTIONS

A technical assessment of the options was undertaken that considered:

- modelling of solar PV only options to determine system size based on load for a fixed level of plant curtailment (Option 1);
- modelling of solar PV + BESS options to determine system size based on load, for a fixed level of plant curtailment, with BESS sizing appropriate for load shedding reduction or load curtailment (Options 2 and 3).
- a 'No Loadshedding' scenario for Option 2A was included to demonstrate the performance of the 2A system in an environment where no loadshedding is experienced (Option 2A NLS).

- a smaller (10 MWh) BESS size scenario for option 2A was included to assess the technical and financial impact of a smaller size BESS (Option 2A 10S). This option was also considered in a scenario of no loadshedding (Option 2A 10S NLS);
- development of energy generation profile, BESS charge and discharge profile, and calculation of the reduction (if any) of unserved energy; and
- network capacity and strength (power system) studies.

A financial assessment of the options was undertaken that considered:

- a supply analysis;
- the cost of supply or tariff of the options considered;
- the impact on the blended cost of supply of the Municipality;
- the Net Present Value (“NPV”) impact of the options; and
- the impact on the Municipal Balance Sheet.

The financial analysis also considered the potential impact of the proposed MunicFlex tariff restructure expected to be implemented.

Further to this consideration of any legal/ regulatory and economic development factors that may differ or have influence on the options were assessed.

Lastly a comparative assessment of the results was undertaken to present the Municipality with the necessary information to make an informed decision on the optimal solution.

The detailed outcome of the technical and financial assessment is presented in **Section 4**.

1.3.3 COMPARATIVE TECHNICAL AND FINANCIAL ASSESSMENT THE OPTIONS

Table 1-3 presents the comparative technical and financial outcomes.

1.3.3.1 Summary conclusion on the technical assessment

A key objective of the technical assessment was to assess the Technical Solution Options against their contribution to reducing the Municipality’s unserved energy as result of loadshedding. Reading from **Table 1-3** the following observations can be made.

For the 2022 reference year, the total amount of unserved energy due to loadshedding was estimated at 7.8% across the entire Municipality.

The baseline assumption for the Option 1 scenarios (i.e. PV only and the Municipality is a load shedding customer) is that the PV plants would need to be offline during load shedding. This is based on the further assumptions that 1.) if Eskom is conducting the load shedding, then the PV plants will not be able to operate in an islanded mode (the PV inverters are grid

following and will automatically shut down when disconnected from the grid) and 2.) if the Municipality is self-load shedding, then the System Operator would not want the Municipality to rely on the Eskom network to provide the ancillary services necessary to support the Municipal network and its PV generator during load shedding . Based on these assumptions, the Option 1 scenarios do not reduce load shedding or unserved energy.

In the case of the Option 2 scenarios, which are the load shedding reduction scenarios, the solar PV plants combined with BESS reduce the quantum of loadshedding down from the estimated 7.8% of unserved energy, to 0.09% of unserved energy for scenario 2A. For 2B, the combined solar PV plant and BESS results in 0.23% of unserved energy for the year. Note that loadshedding is not completely eliminated. Larger solar PV plant and larger BESS capacities than those modelled will result in a higher capex cost with only marginal reduction in the unserved energy, and hence to not improve the situation.

In the case of the Option 2A 10S scenarios, which is the load shedding reduction scenario with a smaller battery size (10 MWh), was only modelled for the Stellenbosch supply point as proxy for all supply point and the quantum of unserved energy was reduced from 7.8% to 3.93%.

In the case of the Option 3 scenarios, which are load curtailment scenarios, the solar PV plant and BESS plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.91% of unserved energy for scenario 3A. For scenario 3B, which is two solar PV plants and one BESS located at Stellenbosch, the plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.57% of unserved energy.

Note: a direct comparison of the unserved energy and hours of unserved energy between the Option 2 and Option 3 scenarios is not a relevant approach. This is because the Option 2 scenarios are working to service the Municipal load during hours of load shedding while the Option 3 scenarios are working to provide a constant reduction over an extended period, to meet load curtailment requirements.

A useful presentation of the effect on hours of load shedding reduction and the percentage of unserved energy for different sizes of BESS is presented in **Figure 1-1**. The graph shows that for BESS sizes above 60 MWh, there is a significantly lower amount of unserved energy if the BESS is used for loadshedding reduction (2A) as opposed to being used for load curtailment (3A). For BESS sizes below 60 MWh the opposite is true (refer to the intersection point of the orange and yellow lines in **Figure 1-1**). The curtailment solution has a much higher quantum of hours of load reduction and, if it is to be successful in meeting the curtailment requirements over longer periods of time, it will need to be done in conjunction with other load curtailment initiatives.

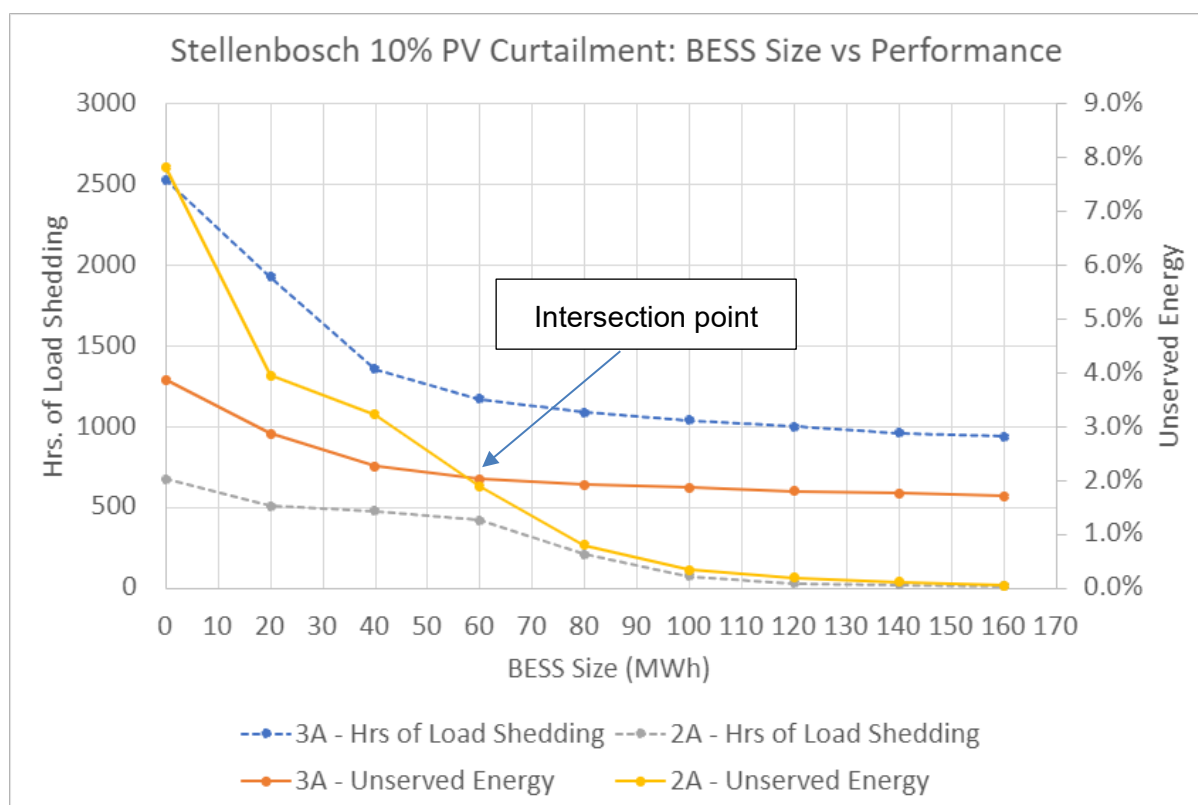


Figure 1-1 Stellenbosch 10% PV Curtailment: BESS Size vs Performance for 2A & 3A

In conclusion, the results suggest that BESS, even at a smaller size of 10 to 20MWh will have an impact on load shedding. Moreover, if the Municipality had to procure a BESS of this size, they would still benefit from improved security of supply, as well as improved production of renewable energy given that the BESS is coupled with a solar PV plant which will not go offline during load shedding.

1.3.3.2 Summary conclusion on the financial assessment

Based on the analysis results shown in **Table 1-3** below, the following main observations and comments are made:

In respect of the NPV assessment

- Options 1A and 1B achieve the highest savings under the current Megaflex tariff structure at R395/MWh and R393/MWh respectively. This remains positive under the anticipated MunicFlex tariff structure and a 10% tariff flex; *(Note: Option 1B (under Megaflex structure) reduce from R 393/MWh to R378/MWh, if wheeling cost apply to energy exported from the Stellenbosch substation to the other three connection points)*
- Option 1C (wheeling) achieves the second highest savings at R355 /MWh) and remains positive under the anticipated MunicFlex tariff structure and a 10% tariff flex.

- Options 2A, 2B, 3A, and 3B are loss-making over the duration of the PPA period under the current Megaflex -, and anticipated MunicFlex tariff structures.

Note: running Option 2A under a no-loadshedding scenario (more efficient battery utilisation and using Megaflex tariff structure) still result in a negative NPV savings value, albeit smaller at around R5/MWh.

- Option 2A10S provides savings under the current Megaflex tariff structure at R321/MWh and remains positive under the anticipated MunicFlex tariff structure and a 10% tariff flex. A further sensitivity was run for this option to ascertain the outcome under a no loadshedding scenario (Option 2A10S NLS) and provided savings under the current Megaflex (R293/MWh)- and anticipated MunicFlex tariff structures.
- Finally, avoided diesel cost shown in **Table 3-10** are immaterial in the context of losses associated with large batteries. However, reduced avoided diesel cost does strengthen the business case for a smaller battery option (e.g. 2A10S).

In respect of the impact on cost of supply:

- average cost of supply reduces between 16c/kWh to 19c/kWh for variations of Options 1; while cost of supply increases between 11c/kWh to 40c/kWh for variations of Option 2 and Option 3 (with the exception of a 10c/kWh saving for both 2A10S and 2A10 NLS);
- the introduction of MunicFlex is expected to reduce the overall savings of renewable energy, which accentuates the savings and losses mentioned above.

Other considerations

- It is important to note that higher Eskom tariff increases in comparison to CPI linked IPP tariff increases will see a growing gap between the average utility- and IPP tariffs; and therefore, have to be considered together with NPV savings.
- Stellenbosch Municipality indicated that above inflation energy tariff increases are not affordable for the average household. Hence, technology solutions that increase the current cost of supply would be less favourable.
- The future MunicFlex rate adjustment is a key consideration for the calculation of the cost of supply.

Conclusion

An embedded solar PV plant without BESS provides the optimal financial impact but, it does not however contribute to reducing unserved energy. It is also noted that the large batteries (e.g. Options 2A/B and 3A/B) required for significant loadshedding reduction, are not economical, given low utilisation levels (batteries substantially used for dispatch during loadshedding) and high capex cost. A smaller battery, as modelled in Option 2A10S, can provide savings, as well as some contribution to reducing unserved energy. It also provides savings under a no-loadshedding scenario.

Table 1-3 Summary outcome of the technical and financial analysis undertaken

Evaluation of Options	Option 1 (Solar PV Only)			Option 2 (Solar + BESS)			Option 2 (Solar + Small BESS)		Option 3 (Solar + BESS)	
Criteria	Imbedded	Imbedded	Wheeled	Loadshedding	Loadshedding	No Loadshedding	Loadshedding	No Loadshedding	Load Curtailment	Load Curtailment
	1A	1B	1C	2A	2B	2A NLS	2A10S	2A10S NLS	3A	3B
Technical outputs										
PV Size (MWp)	34.2MWp (S) + 8.7MWp (C) + 7.9MWp (F) + 1.4MWp (P) = 52.1 MWp total	55MWp	52.1 MWp	47.6MWp (S) + 11.6MWp (C) + 9.7MWp (F) + 1.8MWp (P) = 70.7MWp total	71.3MWp	71.3MWp	47.6MWp	47.6MWp	37.5MWp (S) + 13.1MWp (C) + 10.7MWp (F) + 1.8MWp (P) = 63.1MWp total	66.6MWp
BESS Size (MW/MWh)	No BESS	No BESS	No BESS	50/100 (S) + 15/30 (C) + 10/20 (F) + 2/4 (P) = 77/154 total	55/110	55/110	5/10	5/10	25/100 (S) + 7.5/30 (C) + 5/20 (F) + 1/4 (P) = 38.5/154 total	37.5/150
Substation	All	All	All	All	All	Stellenbosch	Stellenbosch	Stellenbosch	All	All
% PV Curtailment	10%	10%	6.3%	10%	10%	9.9%	10%	9.7%	10%	10%
% Unserved Energy	7.8%	7.8%	7.8%	0.09%	0.23%	n/a	3.93%	n/a	1.91%	1.57%
% Reduction of eskom consumption	28%	31%	32%	39%	43%	44%	39%	39%	34%	36%
Financial Considerations										
Sizing considered in Financial Model	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing
Energy Sold (MWh/annum)	351 211	351 211	351 211	380 237	380 004	380 790	361 235	380 790	373 529	374 805
Total Generation (MWh/Annum)	120 335	127 131	128 183	176 294	142 615	123 590	111 026	111 026	144 394	150 812
2023/24 Cost of Supply (R/kWh)	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
2023/24 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.75	1.75	1.75	1.74	1.74	1.74	1.75	1.74	1.74	1.73
2024/25 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.98	1.98	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.95
2024/25 IPP Cost of Supply (R/kWh)	0.95	0.95	0.90	2.16	2.31	2.31	1.19	1.22	2.62	2.37
2024/25 Blended Cost of Supply IPP & Eskom (R/kWh)	1.79	1.79	1.82	2.26	2.23	2.07	1.87	1.85	2.36	2.26
2024/25 (Reduction)/Increase (c/kWh)	(19)	(19)	(16)	30	27	11	(10)	(11)	40	31
2024/25 NPV Savings - Current Tariff Structure (R/MWh)	395	393	355	(150)	(149)	(-5)	321	293	(368)	(211)
Debt Ratio (36 month guarantee)*	48.0%	49.0%	48.0%	83.0%	77.0%	70.0%	50.0%	51.0%	83.0%	80.0%
Debt Ratio (12 month guarantee)**	37.6%	37.9%	37.7%	48.8%	46.7%	44.8%	38.4%	38.5%	48.7%	47.8%
2024/25 Municflex (Cost of Supply-Drakenstein Excl)	1.94	1.94	1.94	1.90	1.90	1.90	1.92	1.90	1.91	1.90
2024/25 MunicFlex Blended Cost of Supply IPP & Eskom (R/kWh)	1.86	1.86	1.89	2.34	2.29	2.14	1.92	1.89	2.43	2.34
2024/25 MunicFlex (Reduction)/Increase (c/kWh)	(8)	(8)	(5)	44	39	24	-	(1)	52	44
NPV Savings - Proposed MunicFlex (R/MWh)	257	249	166	(284)	(291)	-	192	152	(503)	(359)

*36 months future IPP revenue buyer default termination guarantee

** norm: 45%

1.3.3.3 Measurement against the Municipality's strategic objectives

The Municipality's strategic objectives and related output specifications are detailed in **Section 3.7**, and **Table 1-4** below summarises the strategic objectives and consideration is given as to how the options meet these objectives. The assessment looked broadly at Options 1, 2 and 3 as well as hybrid Option 2A10S (with a smaller BESS solution).

All options contribute to strategic objectives 1 and 2. From the table one can see that no one option meets all the objectives and the balance falls between reducing unserved energy vs impact on cost of supply. As stated in the technical and financial assessment Option 1 provides an optimal financial impact, however it does not contribute to reducing unserved energy. Options 2A/B and 3A/B reduces the percentage of unserved energy, however the financial impact may not be palatable to the Municipality. Option 2A10S provides a middle ground solution as it contributes to reducing unserved energy and does not have a negative impact on cost of supply.

Table 1-4 Assessment of the Options Against the Municipal Strategic Objectives

Municipal Strategic Objectives		Option 1 A,B and C Solar PV plant only	Option 2A+B Solar PV plant + BESS Loadshedding	Option 3A+B Solar PV plant + BESS Load Curtailment	Option 2A10S Solar PV plant + BESS Reduced size
1	Combat climate change and reduce carbon emissions	All the proposed options contribute towards combatting climate change and reducing carbon emissions.			
2	Diversification - Meeting IDP target of procuring electricity from IPPs - 30% by 2027	The maximum contracted capacity determined for the Project will achieve this objective.			
3	Reliable Energy Supply - reduction unserved energy as result of load shedding	This option does not contribute to reducing unserved energy	Based on the sizing Option 2 offers greatest impact on reducing unserved energy	Reduction in unserved energy, however not as much as Option 2	Some reduction in unserved energy (from 7% to 3.9%)
4	Affordability - in respect of Municipality's Balance Sheet	Lower bound guarantee requirements within balance sheet debt limits	This option based on discussions with the Municipality does not appear to be affordable.	This option based on discussions with the Municipality does not appear to be affordable.	Lower bound guarantee requirements within balance sheet debt limits
5	Affordability - in respect of impact on cost of supply and end-user tariff	Financial assessment outcome shows positive impact on Municipal Cost of Supply NPV saving R/MWh: ranging from R307 for Option 1C to R395 for Option 1A.			Financial assessment outcome shows positive impact on Municipal Cost of Supply NPV saving R/MWh: R192
6	Transferring substantial risk to private party, competitive procurement process	By virtue of procuring power under a competitive procurement process and through structuring the PPA risk allocation appropriately, the Municipality's risk is minimised to mainly the payment obligation and dispatch of the IPP plant.			

1.3.4 RECOMMENDED TECHNICAL SOLUTION OPTION(S)

Based on the outcome of the comparative analysis of the Technical Solution Options identified **Table 1-5** summarises the recommendation.

Table 1-5 Recommended Technical Solution option(s)

Option 1 A/B/C Solar PV plant only	Option 2A/B Solar PV plant + BESS Loadshedding	Option 3A/B Solar PV plant + BESS Load Curtailment	Option 2A10S Solar PV plant + BESS Reduced size
Option Recommended?			
YES	NO	NO	YES
Presents a no-regret option from a financial point of view and results in the highest NPV saving. The option however does not contribute to reducing unserved energy.	Contributes to reducing the % of unserved energy, however estimated to increase the blended cost of supply and would place a strain on the Municipality's Balance Sheet.	Contributes to reducing the % of unserved energy, however estimated to increase the blended cost of supply and would place a strain on the Municipality's Balance Sheet.	This presents a middle ground in respect of reducing unserved energy from 7.8% to 3.93% and also results in a NPV saving, albeit lower than Option 1A/B/C.

The Municipality's view of loadshedding in the medium to long term should be considered in deciding whether to pursue Option 1A/B/C vs Option 2A10S. A battery solution can be added to Option 1A/B/C at a later stage if necessary. **The Municipality should make a decision on the preferred technical solution to be procured and provide their approval for the TA Team to continue with the procurement phase on this basis.**

1.4 LEGAL ASSESSMENT

1.4.1 THE PURPOSES OF THE LEGAL ASSESSMENT ARE:

- to determine which legislation and regulations are applicable to the Project, and whether the applicable legislation and regulations has different consequences for the different technical solutions considered for the Project;
- to assess whether the requirements of applicable legislation and regulations present any major obstacles to Project procurement and implementation, or if not any material risks to successful completion of the Projects; and
- to identify key approvals, procedures and other requirements which impact on the planning, procurement and implementation of the Project, so that those can be taken account of in the Project procurement and contracting process.

1.4.2 LEGISLATION AND REGULATIONS APPLICABLE TO THE PROJECT

A summary of relevant provisions in each of the key legal instruments that comprise the legal and regulatory framework within which the Project must be designed and implemented, including primary legislation and the regulations and other instruments issued in terms thereof, is set out at **Annexure B**.

These statutes and regulatory instruments include most importantly the following (not an exhaustive list of relevant laws and regulatory instruments):

- The Constitution of the Republic of South Africa, 1996
- Electricity Regulation Act, No. 4 of 2006
- Electricity Regulations on New Generation Capacity, 2011
- The Integrated Resource Plan, 2019 (and draft IRP, 2023)
- Local Government: Municipal Systems Act, No. 32 of 2000
- Municipal Fiscal Powers and Functions Act, No. 12 of 2007
- Local Government: Municipal Finance Management Act, No. 56 of 2003
- Municipal Public-Private Partnership Regulations, 2005
- Municipal Supply Chain Management Regulations, 2005
- National Treasury Circular No 118
- NRS 048-9 and South African Grid Codes.

In **Annexure C**, we have also set out in some detail a description of the environmental and land-related considerations that apply to the Project.

Although it will largely be the responsibility of bidders to know the requirements of and obtain the various authorisations, permits, consents and other rights and entitlements referred to in those sections of **Annexure C**, it is necessary for the Municipality to understand the regulatory requirements that bidders will be subject to, firstly for purposes of determining the eligibility and evaluation criteria that will be applied, and secondly to ensure that the procurement process allows prospective bidders sufficient time to obtain the necessary authorisations and permits, at the appropriate stage of that process.

Legislation and regulations giving effect to sections 217(2) and (3) of the Constitution which relates to preferential procurement, are dealt with in **section 5.1** of this feasibility study report. These legal instruments include the following:

- Preferential Procurement Policy Framework Act No. 5 of 2000
- Preferential Procurement Regulations, 2022
- B-BBEE Act, 2003

- B-BBEE codes of good practice (as applicable).

1.4.3 KEY LEGAL AND REGULATORY QUESTIONS CONSIDERED

Below is a summary of the key legal and regulatory questions that arise in relation to the feasibility phase of the Project, and our conclusions on these questions. These questions address the applicability of the key legal requirements which bind or affect the Municipality, both in regard to the procurement phase and thereafter, during contract finalisation, and the consequences of those requirements for the Project design and the timing / sequencing of the process.

These questions are not comprehensive but have been identified as critical to the legal assessment at feasibility stage. References to legislation are to provisions that are summarised in more detail in **Annexure B**.

- The procurement of electricity by the Municipality from one or more IPPs does not entail the delivery of “municipal services” through an external mechanism, as contemplated in the Systems Act. Therefore, the requirements set out at section 76 of the Systems Act and in the following sections are not applicable to the Project.
- If the Project is designed so that the Municipality only purchases electricity (and possibly services which are ancillary thereto) from IPPs which bid for the opportunity to establish a new generation capacity project for purposes of sale of electricity (and possibly ancillary services) to the Municipality for the term of the PPA, the Project will not constitute a PPP. The key reason for this conclusion is that the IPPs in this scenario will not be performing municipal functions on behalf of the Municipality. As such, the Project is not a PPP and section 120 of the MFMA, read with the Municipal Public-Private Partnership Regulations, 2005, issued in terms of the MFMA (“Municipal PPP Regulations”), is not applicable to the Project.
- Even if one or more IPP generation facilities were situated on Municipal-owned land, that would not automatically make the Project a PPP. Only if the Municipality requires such generation facilities to be located on specific Municipal-owned land, and requires the generation facility to be constructed, funded, commissioned and operated for the Municipality, is there a possibility that the Project would be considered a PPP. This is not the case, therefore the PPP Regulations do not apply.
- Although the Municipal PPP Regulations are not applicable, relevant sections of the MFMA and the Municipal SCM Regulations are applicable to the procurement process, which will entail competitive bidding. In addition, the Municipality’s SCM Policy and its Preferential Procurement Policy will be applicable.
- It is not a necessary pre-condition for the Project to proceed, for the Municipality to procure a Ministerial determination in terms of section 34 of ERA, to cover the new generation capacity that will be established through the Project. The Municipality can initiate the

Project and procure the new generation capacity based on its own assessment of the need and the feasibility thereof.

- As long as the Project is procured on the Municipality's own initiative and not pursuant to a section 34 Ministerial determination, the NewGen Regulations issued in terms of ERA are not applicable to the Project. The reason for this conclusion is that "new generation capacity" in the NewGen Regulations is defined as generation capacity procured pursuant to a section 34 determination.
- National Treasury Circular No 118 was issued to give guidance to municipalities on the interpretation and consequences of the NewGen Regulations, where applicable to municipal IPP procurement. Circular No 118 is not directly applicable to the Project or binding on the Municipality but provides useful guidance on best practice in municipal IPP procurement. To date, the steps taken by the Municipality in relation to the Project are consistent with the preparatory steps outlined in Circular No 118, for projects that fall within Scenario 2.
- Based on the current Schedule 2 of ERA, it appears that IPPs which are successful in the Municipality's Project procurement process will not require a generation licence to be issued by NERSA. Depending on where the generation facilities are located, they will be exempt from both licensing and registration by NERSA under item 2 of Schedule 2, or exempt from licensing but required to register under item 3 of Schedule 2 of ERA.
- Because the IPP generation facilities will not have to be licensed by NERSA under ERA, it will not be necessary for the Municipality to obtain Ministerial approval in terms of section 10(2)(g) of ERA, for purposes of facilitating the issue of generation licences by NERSA.
- The contracts which result from the Project procurement process will result in long-term financial commitments on the part of the Municipality. Therefore, Municipal Council approval will be required in terms of section 33 of the MFMA. Section 33 approval should be sought towards the end of the procurement process, or at least after the RFP has been issued, when the PPAs and associated agreements are in near-final form. To the extent that the public participation component of the section 33 approval process can be aligned with the Municipality's IDP process, this opportunity should be pursued.
- It will be prudent, and has become best practice in IPP procurement processes, to issue largely non-negotiable draft agreements along with the RFP, for purposes of indicating to prospective bidders what the intended commercial terms of the transaction will be, and the respective risk allocation between the parties. The draft agreements will also, to the extent relevant, include any socio-economic development obligations imposed as contract terms by the Municipality.
- There are no regulatory restrictions in the NRS 048-9, the Municipality's Distribution Licence, or the Electricity Supply Agreements, that would require consultation with or permission from Eskom for the establishment of an embedded generation facility in the Municipality's licensed area. However, it should be noted that embedded generators

connected to the distribution system will still have to comply with the specifications and obligations set out in the various distribution Grid Codes.

- Furthermore, Eskom as the System Operator has the ultimate responsibility for overall system stability and is empowered to take appropriate measures in an emergency to mitigate any risk to grid stability. Also, Eskom is and will remain the principal supplier of electricity to the Municipality, and there have apparently been ongoing engagements between Eskom and the Municipality on amendments to or replacement of the existing Electricity Supply Agreements for the Stellenbosch area. Therefore, it would be prudent for the Municipality to continue engaging with Eskom on the Project and the potential impact of the Project on grid stability in the Western Cape, to obtain Eskom's support.
- In order for a generator to be grid tied to the Interconnected Power System ("**IPS**"), as contemplated in Option 1C which envisages one solar PV plant connected anywhere on the IPS, an application for grid connection will have to be made in accordance with the applicable grid capacity allocation process. However, if the embedded generation facility is connected to the Municipality's distribution system, then an application for a grid connection should be made to the Municipality. There is no indication in the applicable regulations that an approved grid connection application is transferable, therefore it should not be assumed that the Municipality could transfer a grid capacity allocation made by Eskom / NTC for the Municipality to an IPP at a later stage.
- The applicable Grid Code for Battery Energy Storage Facilities (BESF) does not place any restrictions on embedded generation projects, but any generation facilities which include BESS will have to comply with the technical specifications of the BESF Grid Connection Code, should the technical option chosen for the Project include a BESS component.
- If the preferred technical option entails the Municipality becoming a load curtailment customer, then NRS 048-9 will have to be complied with in terms of the requirements relating to: eligibility for becoming a load curtailment customer; the application process to be followed by the Municipality; and the technical specifications that must be met.
- The legal landscape surrounding the approval of project pricing for IPPs and the regulation of fees, charges, and tariffs by the NERSA is multifaceted and subject to ongoing developments. While IPPs exempted from licensing under the ERA will not be subject to NERSA approval for PPA pricing, the Municipality is required to obtain NERSA's approval of its electricity tariffs for municipal services, on an annual basis, including electricity. Recent legal developments underscore the necessity for a cost-effective methodology in tariff approval processes.

In addition to the above, consideration is given as to the regulatory requirements that will be applicable to bidders in the competitive bidding process which the Municipality will conduct for purposes of selection of successful bidders which will implement the Project.

1.5 SOCIO ECONOMIC DEVELOPMENT ASSESSMENT

The Municipality's current approach to awarding preference points for specific goals considers B-BBEE level and locality: at least 50 percent for the B-BBEE contributor status level of the tenderer and a maximum of 50 percent for the location of the business offices of the tenderer.

It would be administratively simple to apply the Municipality's approach to preference points to this Project. However, it would likely do little to promote meaningful, broad-based socio-economic benefit or help mitigate local community risk. Furthermore, it would be unwise to ignore the precedents set by South Africa's Renewable Energy Independent Power Producer Procurement Programme ("**REIPPPP**").

There are three options available to address the limitations of Stellenbosch's preference scoring and to mitigate local community risk in this Project: 1) amend the Municipality's Preferential Procurement Policy to make provision for creating an expanded preference scoring system for this Project; 2) use "objective criteria" related to socio-economic development in the assessment of bid responses; and 3) include contractual obligations related to socio-economic development as a condition of bid award.

The outcome of a pros and cons assessment for each of the abovementioned three options preferred utilising contractual obligations related to socio-economic development. The pros and cons relate to a) impact on the procurement process and future contract management; b) likely behaviour by bidders; c) possible influence on the electricity tariff; and d) socio-economic development impact.

To determine the socio-economic development obligations, assessment criteria were applied to ten common socio-economic development measures. The following measures have been prioritised for their suitability to this Project, for the benefit of the local community:

- Creating **employment** in the construction programme and power plant operations;
- Spend on **skills development** of historically disadvantaged individuals;
- Building specified **social infrastructure** for local community benefit; and
- Spend on **social well-being programmes**.

It is recommended that these socio-economic development measures should be incorporated as a condition of award/ contractual obligation. It is estimated that these measures, as envisaged, will have a negligible impact on the electricity tariff i.e., 1 cent per kWh.

The Municipality should apply its current preference points system to the bid evaluation for this Project. Specifically, the Municipality should award a maximum of 10 points for the B-BBEE Level of the bidder. A 90/10 preference points evaluation system is envisaged since the estimated total value of the 20-year PPA will exceed R50 million.

1.6 PROCUREMENT PLAN

1.6.1 THE PROCUREMENT PLAN COMPRISES THE FOLLOWING KEY ASPECTS:

- Technical solution to be procured
- Regulatory and approval process
- Details of the Project Team and their assigned functions
- The Project stakeholders and management during the procurement phase
- Outline of the procurement principles
- Potential procurement challenges that may affect the Project
- Quality assurance process for procurement documents
- Establishing an audit trail for the procurement process

1.6.2 TECHNICAL SOLUTION TO BE PROCURED

The STMIPPPP will be designed to facilitate the procurement of new generation capacity from either Option 1: Solar PV or Option 2: Solar PV and BESS (10 MWh), to contribute towards the strategic objectives of the Municipality. **The Municipality is required to select their preferred option.**

Table 1-6 outlines the maximum contracted capacity for purposes of the STMIPPPP. The minimum individual IPP project sizes making up the maximum contracted capacity for the Project will be determined during the procurement phase, subject to the outcome of the points raised in Section 1.6.6.

Table 1-6 Recommended Options - Maximum Contracted Capacity for the Project

Technology	Maximum Contracted Capacity* (Total from all Supply Points)
Option 1A/B/C: Solar PV	~ 55 MW _p / 45 MW _{AC} (total)
OR	
Option 2A10S: Solar PV and BESS	~ 71 MW _p / 59 MW _{AC} (total) ~ 7.5 MW / 15 MWh (total)

**The minimum individual IPP project sizes making up the maximum contracted capacity for the Project will be determined during the procurement phase*

An important consideration would be how the Municipality's other initiatives, specifically the Tender: B/SM 60/24 Request for Proposal (RFP) from Independent Power Producers to Provide 20MWP Renewable Energy to Stellenbosch Municipality ("**B/SM 60/24 20MW**

Tender") impacts the maximum contracted capacity for the Project as specified in **Table 1-6**. This is considered in Section 1.6.6 - in summary if the B/SM 60/24 20MW Tender results in a contract with the Municipality then the maximum contracted capacity for this Project in **Table 1-6** will be reduced accordingly.

1.6.3 SUMMARY OF THE REQUIRED APPROVALS

Table 1-7 provides a summary of the regulatory and other required approvals for the Project.

Table 1-7 Summary of required approvals

Approval	Required for	Grantor
Submit Feasibility Study to Municipal Council to support the "go / no go" decision	To confirm Municipal Council support for the Project. National Treasury, Provincial Treasury, DMRE and COGTA will be consulted in the course of obtaining Municipal Council approval in terms of section 33 of the MFMA, and although a Feasibility Study is not a regulatory requirement, having completed one will assist in motivating positive responses.	Municipal Council
Bid Specification Committee approval of RFP documents	For submission to Municipal Manager	BSC
Municipal Manager approval of RFP documents (if not delegated to Chair of BSC)	Issue of RFP	MM
Bid Evaluation Committee approval of its recommendations for contract award	Recommendation of preferred bidders, and disqualifications	BEC
Bid Adjudication Committee approval of its recommendations for contract award	Recommendation of preferred bidders [and disqualifications]	BAC
Municipal Manager approval of contract award, subject to section 33 approval	Approval of preferred bidders [and disqualifications]	MM
Municipal council approval in terms of section 33 of the MFMA	Required to enter into the PPA	Municipal Council

1.6.4 RECOMMENDED PROCUREMENT APPROACH

It is recommended that the Municipality follow the following process:

- Issue an EOI during the feasibility or procurement preparatory phase - The purpose of the EOI would be to solicit information and interest in respect of the Project. The key objective of this EOI would be to gather information in respect of the location of potential projects and availability of land, as well as to communicate to potential interested parties well in advance of the RFP issue date, to allow sufficient time for preparatory activities. The Municipality would solicit information from interested parties on a non-compulsory basis.
- It is further recommended that for purposes of the formal procurement process, the Municipality follow a single stage procurement process, whereby complete bids (including technical, financial and economic development proposals) will be solicited. Once submitted, those proposals will firstly be evaluated for compliance with the functional criteria. Bidders that pass the functional evaluation will be competitively evaluated based on a bidder's price and specific goals pertaining to economic development on a 90/10 preference points evaluation system.

Reasons for recommending a single-stage process for the Project include that it is familiar to the market due to REIPPPP; and that a single-stage procurement process can be conducted over a shorter period than a two-stage procurement process. Because of that, it is also generally more cost-effective and less onerous for the Municipality than a two-stage procurement process.

1.6.5 CONTRACTING ARRANGEMENTS FOR THE STMIPPPP

A key part of the success of the REIPPPP as well as the recent C&I IPP PPA market is to issue standardised agreements which are part of the procurement documents. It has also become standard practice to prohibit mark-ups to the agreements. The non-negotiable condition brings several benefits that include:

- an optimised commercial close period which is not delayed due to protracted negotiation;
- it promotes the transparency and integrity of the procurement process where the Price bid is transparent and cannot be amended post bid submission or appointment of preferred bidder as result of negotiation of key terms i.e. all bidders are treated equally based on transparent principles captured in the agreements where the risk of each party is clearly known before bidding;
- the need to maintain consistency in the risk positions across all preferred bidders once the agreements are signed.

Section 5.3.15 of this feasibility study report provides information on the likely contractual arrangements required for the Project which sets out a brief summary of the purpose and contents of the following agreements, which will be issued in draft along with the RFP (i.e. as part of the procurement documents):

- PPA

- Direct Agreement
- Independent Engineer Agreement
- Connection Agreement.

1.6.6 ITEMS TO RESOLVE AND PREPARATORY ACTIVITIES DURING THE PROCUREMENT PHASE

The items to resolve and preparatory activities during the procurement phase are summarised below:

Formal Eskom confirmation on Grid Capacity - Connecting a large solar PV plant anywhere within the Municipality's distribution networks will have a negative impact on the Eskom Western Cape supply area evacuation capacity constraint. It is unclear if a large solar PV plant connected behind the meter would have to apply to the Eskom grid access unit for approval. The TA Team has not been able to obtain a conclusive response from Eskom on this aspect. This requires resolution and it is recommended that the Municipality and or WCG pursue this topic with Eskom to obtain formal written confirmation.

Formal Eskom confirmation on how they view aggregated supply between the Municipal Points of Supply ("PoS") - i.e. if Eskom views the Stellenbosch Municipality load (from all supply points) in aggregate e.g. a reduction of load at the Stellenbosch meter which is equal to the demand at Cloetesville, Pniel and Franschhoek will be viewed the same as 'load shedding' of those supply points. Our understanding through discussion with Eskom is that this option may only be possible for Municipal loads connected through the same Eskom substation. Further confirmation is required from Eskom. This will influence the minimum and maximum size of individual IPP projects that will be able to participate in the STMIPPPP making up the maximum Project capacity.

Land availability – A potential risk has been identified in respect of land availability and whether there will be sufficient land available for the Project within the Municipal boundary that will be able to connect to the Municipal distribution network. It is recommended that the Municipality issue an EOI (which has already been drafted by the TA Team) to gather information from the market in respect of potential project sizes, location and readiness to participate in the intended procurement process. This will inform key decisions as to the intended procurement programme design and may influence the decision whether to consider including wheeling from other points of connection.

Bidder readiness and sufficient time to obtain necessary approvals - IPP projects take time to develop, obtain necessary environmental and other approvals. There is a legal fairness consideration, in that the Municipality must give potential bidders sufficient time to prepare their bids. It is recommended that the EOI referred to above, also provide some high-level information on the planned procurement process and thereby informing interested parties of

the indicative timeframe of the procurement process which will allow them to commence with preparatory activities.

Impact of the B/SM 60/24 20MW Tender on the Project - The Municipality issued the B/SM 60/24 20MW Tender with the objective to procure 20 MW of renewable energy from an IPP. Three bid responses were received, and it is understood that the bids have been evaluated with award of a preferred bidder imminent. The impact of the B/SM 60/24 20MW Tender could not be assessed as no information could be shared at the time of undertaking this feasibility study. The impact will have to be considered before releasing the STMIPPPP RFP. The estimated time for release of the STMIPPPP RFP is January 2025, at which time the success of the B/SM 60/24 20MW Tender should be known as the preferred bidder's project should be close to achieving commercial and financial close. The size of the maximum contracted capacity of this Project as specified in **Table 1-7** that can be procured, will be confirmed or adjusted at that time.

Grid connections - The Municipality will need to consider how it will manage approaches from potential bidders in respect of connecting their projects to the Municipal grid. It is unclear how many developers might have conducted advanced feasibility studies on other points of the network, and the extent of engagement with local landowners in terms of permissions for wayleaves. This process similar to the Cost Estimate Letter process that is well established by Eskom will need to be considered during the procurement phase. This is described in more detail in **section 4.5.3** of this report.

Control Measures - The Municipality will need to investigate and implement the necessary control measures to ensure it is able to dispatch any generation plant based on any local or Eskom grid requirements. This is described in more detail in **section 4.5.4** of this report.

2. INTRODUCTION

2.1 BACKGROUND

South Africa is facing an ongoing energy crisis, with load shedding increasing year-on-year, which has placed a severe strain on the economy and future economic growth as well as on business profitability and confidence.

The Western Cape Government's ("**WCG**") five-year Provincial Strategic Plan ("**PSP**") for 2019 to 2024 identifies the constraints of the energy sector as a key inhibitor of economic growth in the Western Cape Province ("**the Province**") and at the same time recognises the importance of energy resilience and a transition to net zero carbon.

The Western Cape Municipal Energy Resilience ("**MER**") Initiative was initiated by the Department of Economic Development and Tourism ("**DEDAT**") in the 2020 / 2021 financial year. In the 2023 / 2024 financial year, the MER Initiative has been subsumed into the Energy Resilience Programme ("**ERP**") as per the WCG Whole of Government approach on energy. The ERP has two strategic objectives which are to reduce the impacts of load shedding on businesses and citizens, and to facilitate a lower level of reliance on Eskom Holdings SOC Limited ("**Eskom**") in the Province.

A recommendation from the outcome of a municipal readiness assessment forming part of the MER Initiative was the identification of five (5) projects within selected candidate municipalities (the "**Pioneering Projects**"), namely:

- Pioneering Project 1: Solar PV ("**Photovoltaic**") or wind project(s) in Drakenstein;
- Pioneering Project 2: Solar PV projects in Stellenbosch;
- Pioneering Project 3: Solar PV projects in Mossel Bay;
- Pioneering Project 4: Solar PV projects in Saldanha Bay; and
- Pioneering Project 5: Solar PV and / or wind project(/s) contracted through a multi-jurisdictional entity for Drakenstein, Mossel Bay, Saldanha Bay and Stellenbosch.

The Stellenbosch Municipality ("**the Municipality**") has been prioritised as the first municipality to implement one (1) of the Pioneering Projects, and in March 2022, the Stellenbosch Municipal Council approved a resolution to proceed with the Stellenbosch Municipal Independent Power Producer Procurement Programme ("**Stellenbosch MIPPPP**" or "**the Project**").

On the third Municipal Council meeting on 30 March 2022 the Municipal Council noted the investigation launched by the WCG, being the MER Initiative, and resolved:

“(c) that in terms of Pioneering Project 2, Council approves the setting up and issuing of a Request for Proposals (RFP) tenders to call for proposals from suppliers, to build multiple generating facilities and supply electricity to Stellenbosch up to a combined level of 51MW;

(d) that all relevant process works as prescribed by Section 34 of the Electricity Regulation Act, Act 4 of 2006, as well as associated regulations, as amended, be commenced with up to the level prescribed, in addition to those already commenced with by the CSIR;

(f) that it be endeavoured to also purchase electricity to cover the daily, weekly and seasonal requirements of Stellenbosch Municipality in its objective to be able to reduce the necessity to Load Shed during periods of reduced supply from Eskom.”

Following the resolution, the Municipality was given Project Transaction Advisory (“**TA**”) support, with the understanding that a successful procurement programme in one (1) municipality would unlock the potential for the same or similar implementation in other municipalities and the results and learnings will be used as a building block for alternative procurement structuring and evaluation in other municipalities.

On 28 July 2023, an open tender was advertised by the WCG’s Department of Infrastructure (“**Department**”) for TA support to the Department and the Municipality for the next three (3) years, to facilitate the successful conclusion of a long-term Power Purchase Agreement (“**PPA**”) between the Municipality and one (1) or more Independent Power Producers (“**IPPs**”). Pursuant to the tender process, the Cresco Advisory Consortium (comprising Cresco Advisory, Edward Nathan Sonnenbergs Inc, ED Platform, Osmotic Engineering Group and Turner & Townsend) (“**TA Team**”) was appointed on 12 October 2023 as Transaction Advisor to support the implementation of the Stellenbosch MIPPPP.

2.2 OBJECTIVE OF THE FEASIBILITY STUDY

The core objective of the feasibility study is to test whether the Project, in its recommended form:

- is consistent with the Municipality’s legal obligations, development plans and strategic imperatives;

- that it will be affordable³ for the Municipality during the Project term and will offer value for money relative to other options;
- that it is technically feasible;
- that all material risks in relation to the Project are identified and mitigated as far as possible; and
- that it will not have unintended adverse consequences for the Municipality or the local community.

As stated in the Inception Report concluded by the TA Team before commencing with the feasibility study, and as detailed further in this feasibility study report, even though the Project is not strictly speaking a PPP and is not subject to the requirements of the NewGen Regulations, it is consistent with good practice and a critical first step to conduct a feasibility study before embarking on a procurement process. In doing so, we have taken account of relevant provisions of the statutes and regulations bulleted below, as a useful framework a) for developing this feasibility study report, b) for engagement with key stakeholders, and c) for the considerations that will have to be applied by the Municipal Council when it makes a final decision on the Project:

- section 120 of the MFMA;
- the Municipal Public-Private Partnership Regulations, 2005, issued in terms of the MFMAPPP Regulations;
- the Municipal Service Delivery and PPP Guidelines;
- the NewGen Regulations;
- section 78(3)(c) of the Systems Act; and
- sections 33(1)(b) and (c) of the MFMA.

Engagements with key stakeholders include engagements required for regulatory compliance, for example in terms of section 33 of the MFMA, for purposes of licensing and tariff-setting under the ERA, and for obtaining Ministerial approval for the Project in terms of the ERA, if applicable.

The feasibility study report has been structured to cover the following sections:

³ 'affordable' will be tested against the Municipality's ability to meet its financial obligations should it enter into an agreement as result of the Project. This will also consider affordability to pass through increases in electricity tariffs to end users.

- Needs analysis
- Options Analysis (Technical Solution Option identification with a Technical Assessment and Financial and Value Assessment)
- Legal Assessment
- Economic Development Assessment
- Procurement Plan (with recommended procurement option)

3. NEEDS ANALYSIS

3.1 INTRODUCTION

The Needs Analysis identifies the specific requirements and Municipal need and considers whether it is consistent with the Municipality's legal obligations, development plans and strategic imperatives. It also aims to identify the required resources, scope, and objectives of the Project. The needs analysis is broken into the following key focus areas:

- Alignment with WCG and Municipal strategic objectives.
- Project contribution in relation to government policies.
- Ability and capacity of the Municipality to implement the Project and monitor compliance for the duration of the Project.
- Detailed stakeholder identification and management plan.
- Defining the output specifications.
- Defining the Project which includes an assessment of whether the proposed Project will meet the Municipality's needs in the time required.

3.2 THE WESTERN CAPE GOVERNMENT'S APPROACH TO ENERGY RESILIENCE

3.2.1 WCG PROVINCIAL STRATEGIC PLAN

The WCG's PSP has identified priority focus areas which include 'Vision Inspired Priority 2: Growth and Jobs' highlighting several problem areas under this priority of which 'Problem Area 3: Climate change impacts and resource pressures' touches on the constraints of the South African energy sector and chronic electricity supply shortages, infrastructure backlogs, and capacity and financial challenges related to the national service provider, Eskom. Focus areas and interventions have been developed to address some of these challenges and Focus Area 5 looks to creating an enabling environment for economic growth through energy resilience and affirms its support to procure power from IPPs.

3.2.2 WCG GROWTH FOR JOBS STRATEGY

The WCG's 2023 Growth for Jobs ("G4J") Strategy includes energy resilience and a transition to net zero carbon as a priority focus area, with energy resilience being recognised as key to creating an enabling environment to maintain and grow the economy. It has set ambitious goals in this regard, which include reducing reliance on Eskom for electricity by between 1 800 to 5 700 megawatts ("MW") by 2035.

3.2.3 THE WESTERN CAPE MUNICIPAL ENERGY RESILIENCE INITIATIVE

The Department of Economic Development and Tourism's ("DEDAT") Strategic Plan 2020 to 2025 includes 'Resource Resilience' as a priority. Resource Resilience is an energy-related long-term strategic outcome to improve energy resilience with a target of an additional nominal capacity of 500 MW of lower carbon electricity implemented in the Province within five years.

The MER Initiative originally set a target of an additional nominal capacity of 500 MW of lower carbon electricity implemented in the Province within five years. However, the target to reduce reliance on Eskom in the Province has been substantially increased against the backdrop of continuing power shortages, as detailed in **Table 3-1**.

Table 3-1 Targets to facilitate a lower level of reliance on Eskom in the Province

Targeted timeframes	Target to reduce off-take from Eskom
Short term – by 2025	500 MW to 750 MW
Medium term – by 2027	750 MW to 1 800 MW
Long term – by 2035	1 800 MW to 5 700 MW

In order to meet the stated strategic outcomes in respect of Municipal Procurement of IPPs, the MER Initiative was conceptualised on the basis that it would comprise three implementation phases:

- Phase 1: Development of business cases, municipal evaluation, project identification and feasibility, and the Pioneering Project roadmap.
- Phase 2: Implementation of Pioneering Projects at selected candidate municipalities.
- Phase 3: Project implementation in municipalities across the Province.

During the MER Initiative Phase 1, several reports were produced that were reviewed by the TA Team as part of the Inception Phase and which informed that methodology and approach of the Feasibility Phase.

A recommendation from the outcome of the MER Initiative Phase 1 assessment was for the Municipality to consider the procurement of solar PV generation at a capacity peak of 37 megavolt-amperes ("MVA") at the largest Point of Supply ("PoS"), or it could have various intake points on its three networks, the total of which must not be larger than 51.2 MVA from one (1) or more IPPs. A recommendation from the TA Team during the Inception Phase was for the Municipality to further consider including Battery Energy Storage Systems ("BESS") as part of the technical options to be evaluated in the Feasibility Stage. The TA submitted a quotation to the Department to include BESS as a technical option to be assessed, which was approved by the Department through a formal project contractual change request.

3.3 STELLENBOSCH MUNICIPALITY'S STRATEGY AND APPROACH TO ENERGY RESILIENCE

3.3.1 MUNICIPALITY ESTABLISHMENT

The Municipality was established on 22 September 2000. The Municipality is a local municipality as defined in section 1 of the Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998) ("**Municipal Structures Act**"), being a municipality that shares municipal executive and legislative authority in its area with the District Municipality, and which is described in section 155(1) of the Constitution as a Category B municipality.

The Municipality is a municipality with a mayoral executive system combined with a ward participatory system, as provided for in the Western Cape Determination of Types of Municipalities Act, 2000 (Act No. 9 of 2000), as amended by the Western Cape Determination of Types of Municipalities Amendment Act, 2002 (Act No. 4 of 2002).

3.3.2 VISION AND MISSION STATEMENTS

The Municipality's vision is to be "An integrated valley of opportunity and innovation".

Efforts to achieve this vision are channelled into five (5) specific focus areas:

- Valley of possibility – aimed at attracting investment, growing the economy and employment.
- Green and sustainable valley – aimed at ensuring that the asset base of the Municipality is protected and enhanced.
- Safe valley – aimed at ensuring that its residents are and feel safe.
- Dignified living – aimed at improving conditions for residents through access to education and economic opportunities.
- Good governance – aimed at ensuring that the Municipality is managed efficiently and effectively to the benefit of all stakeholders.

The Municipality's mission is to deliver services in a sustainable, cost-effective and accountable manner that will provide the most enabling environment for civil and corporate citizens.

The Municipality subscribes to core values that include integrity, accountability, transformation, innovation, excellence and responsiveness.

3.3.3 INTEGRATED DEVELOPMENT PLAN

The Municipality published its 5th Generation Integrated Development Plan 2022 – 2027 (“IDP”) in May 2022 as prescribed by Section 34 of the Systems Act.

The IDP is the Municipality’s principal five-year strategic plan that deals with the most critical development needs of the municipal area (external focus) as well as the most critical governance needs of the organisation (internal focus). It guides and informs all planning and development to be undertaken and forms the basis for the Municipality’s medium-term expenditure framework, annual budgets, and performance management system.

Budget expenditure is closely linked to these focus areas and achieving these outcomes.

The IDP lists 17 Sustainable Development Goals 2030, and Goal 7: ‘Ensure access to affordable, reliable, sustainable, and modern energy for all’ speaks to the Municipality’s strategy in respect of energy resilience. Further, Goal 13: ‘Take urgent action to combat climate change and its impacts’ speaks to the drive towards greener energy sources.

It also provides enabling milestones to be achieved by 2030 which include: ‘Produce sufficient energy to support the industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third.’

The Municipality has several medium- and longer-term sector plans that direct the implementation of the different functional areas. These plans form an integral part of the IDP. The IDP provided information in respect of the Electrical Master Plan, stating that it was due for an update as result of significant changes in the electricity supply industry in South Africa.

The IDP stated that a Municipal Energy Master Plan (“MEnMP”) has been launched that will form the basis of where electricity is likely to be generated or purchased and stated once the MEnMP and Spatial Development Plan have been completed a new Electrical Master Plan will be developed.

The plans aim to provide the Municipality with a clear view and a long-term strategy for the development of electrical infrastructure required to support the envisaged demand growth in Stellenbosch and surrounding areas.

The Portfolio Infrastructure Services five-year plan contained within the IDP lists the Directorate: Infrastructure Services and the Department: Electrical Services as being responsible for developing alternative energy supply, and the purchasing of electricity from IPPs and the conclusion of an IPP tender as a key priority, with a target of 30% of total energy purchased to be purchased from an IPP by 2027.

The IDP clearly contemplates that the Municipality will pursue procuring power from IPPs and as such this Project will fall within the strategic direction of the Municipality as recorded in the IDP.

3.3.4 SPATIAL DEVELOPMENT FRAMEWORK

One of the key elements of the IDP is a Spatial Development Framework (“**SDF**”) which includes guidelines for a land-use management system for the Municipality. This requirement is provided for in Section 26(e) of the Systems Act. The SDF is required to constitute the basis for all decisions relating to spatial planning and land-use management within a municipality's jurisdiction. In fact, once the IDP is adopted by a Municipal Council, it serves as an operational guideline to the legislative and executive arms of a municipality.

Practically, this means that once the Project site has been identified the relevant zoning of the Project site would need to be considered to determine whether it needed an amendment and it would also need to be determined whether this use is consistent with the Municipality's SDF.

It is currently not contemplated that Municipal land will be utilised for the Project, and therefore if rezoning is required it would be the responsibility of the IPP to undertake the required rezoning applications.

3.3.5 BACKGROUND TO OTHER AVAILABLE STUDIES

During the advent of more frequent loadshedding periods by Eskom, the Municipal Council decided to investigate ways and means to reduce the impact on civil society and businesses by means of diversifying electricity supply. To this end, the Municipality entered into a Memorandum of Understanding (“**MoU**”) with the University of Stellenbosch, the Council for Scientific and Industrial Research (“**CSIR**”) as well as the WCG, and the following studies were undertaken.

- Energy Master Plan
- Cost-of-Supply study
- Energy Storage Investigation
- Electricity Master Plan.

The Energy Master Plan, Cost-of-Supply study and Electricity Master Plan were funded by the WCG's DEDAT as part of the MER Fund under the MER Initiative.

3.3.6 THE MUNICIPAL ENERGY MASTER PLAN

The CSIR authored the MEnMP, titled “Municipal Electricity Master Plan – Electricity Pathways for Stellenbosch Municipality – 30 September 2022”.

It is stated in the IDP that the MEnMP aims to provide the Municipality with a clear view and a long-term plan for the development of electrical infrastructure required to support the envisaged demand growth in Stellenbosch and surrounding areas.

The main objective of the MEnMP is to assess various electricity pathways for the Municipality and to compare these pathways against a set of criteria that include minimising electricity tariffs, improving security of supply and moving towards long term carbon neutrality. It is stated in the MEnMP that it provides the “what” should be procured and “when”. The “how” and by “who” still needs to be developed by the Municipality.

The plan is premised on a least-cost, techno-economic optimisation of supply options to meet demand in the region. The outlook is from the year 2022 to 2040, the reference year is 2021.

The MEnMP considered two (2) technology scales, namely embedded or distributed (distributed energy refers to electricity generation or storage plants connected to a distribution network rather than the transmission network), and utility scale generation:

- Rooftop solar PV – the plan states that rooftop solar PV will likely play a significant role in the electricity future of the Municipality.
- Utility scale generation - the plan considered a basic Levelised Cost of Electricity (“LCOE”) calculation for three (3) technologies, being on-shore wind, solar PV (fixed tilt) and solar PV (single axis tracking). This analysis showed that wind is significantly more expensive than solar PV and that the capacity factor for wind energy in Stellenbosch is low.

In respect of the utility scale generation, five (5) scenarios were considered:

- Business as usual.
- Least cost (nodal).
- Least cost (regional across the Municipality).
- 100% autonomy with no reliance on Eskom.
- Loadshedding avoidance.

Under the least cost (nodal) scenario, the build capacity is provided in **Table 3-2**. It is stated in the short-term, that the Municipality should procure wind and solar PV and due to relatively small load-centres, solar PV is favoured.

Table 3-2 Build capacity: Least Cost Nodal (without wheeling)

Built Capacity MW		Wind	PV	Battery (4 hours storage)
Short-term	2022 - 2025	20	65	15
Medium-term	2026 - 2030	0	35	20
Long-term	2031 - 2040	0	25	35
Installed capacity by 2040		20	125	70*

* Not the sum as battery storage lifespan is 10 years

Source: MEnMP

Under the least cost (regional across Municipality) scenario, the wheeling of electricity within the municipal boundaries via Eskom's network was investigated. It was shown that the Municipality could reduce the cost of electricity by a further eight (8) percent through wheeling. Wheeling allowed for a greater exploitation of better wind resources and reduced the curtailment of wind. The total cost of electricity would need to be evaluated, not just the generation costs. Further studies on wheeling from outside the municipal boundaries were recommended.

It was shown that it is not economically optimal for the Municipality to disconnect from the grid.

In respect of the loadshedding avoidance scenario, technical solutions to mitigate loadshedding were investigated. BESS was selected over peakers (internal combustion engines and open cycle gas turbines). Only with stage eight (8) loadshedding, which has limited time available for charging of the batteries, were peakers required to supplement BESS. It was shown that about 50 MW with 4-hours storage located across the Municipality could reduce the amount of unserved energy by about 80%. The MEnMP states that when compared to the Cost of Unserved Energy ("**COUE**") at R93.00/kWh⁴, even if taken at 10% of this value there is a strong case for BESS. It further states that the question decision makers need to evaluate is if this premium is a justified cost to mitigate loadshedding and

⁴ A report prepared by Nova Economics for Eskom, dated 3 December 2020 estimates that the overall cost of load shedding is between R7.61/kWh and R9.53/kWh (in 2020 prices).

recommended further studies be undertaken to unpack these possibilities. Additionally, it is recommended in the MEnMP that the Municipality should engage with the System Operator as to what is permissible during loadshedding.

The technical solutions to meet the Municipality's needs and objectives as well as the financial impacts of each of the options has been considered in **Section 4** of this feasibility study report to enable the Municipality to make an informed decision in respect of the Procurement Phase.

3.3.7 UPDATED MUNICIPAL ELECTRICITY MASTER PLAN

GLS Consulting (Pty) Ltd authored the Updated Municipal Electricity Master Plan ("**EIMP**") titled, "Electricity Master Plan – November 2023".

The main objective of the EIMP was to update the existing Electricity Master Plan for the distribution network in the Municipal area of supply (which excludes the Eskom areas of supply), incorporate findings from the MEnMP and develop a network investment strategy. Additionally, with the shift to renewable energy in the province and amongst high income residential consumers and industrial / commercial consumers, there is a need to understand the impact of the small-scale embedded generation ("**SSEG**") on the Medium Voltage ("**MV**") networks.

The EIMP included a thorough examination and assessment of the Municipality's electrical grid requirements for enhancement, expansion, and increased reliability, which resulted in the identification of vital capital projects and providing a prioritisation of the required capital projects for the period 2023 to 2042.

The EIMP has been considered as part of the technical due diligence in **Section 4.4.2** of this feasibility study report to assess the impact the Project may have on the distribution network and whether further strengthening may be required.

3.3.8 COST OF SUPPLY STUDY

Lyners conducted an Electricity Cost of Supply Study ("**COS Study**") for the Municipality as per the requirements of National Energy Regulator of South Africa ("**NERSA**") in March 2023.

The key objectives of the COS Study were to establish the true cost and revenue of electricity supply in the Municipality and to establish the cost of supplying customers versus the tariff for each customer to gain a better understanding of the cross-subsidies that may exist.

The COS Study found that some customers were being subsidised due to the lack of fixed charges and a recommendation was made that tariffs should be aligned to the National Electricity Pricing Policy and that tariffs should be aligned to the underlying cost of supply.

3.3.9 ENERGY STORAGE INVESTIGATION

The University of Stellenbosch's Centre for Renewable and Sustainable Energy Studies ("CRSES") conducted an energy storage study for the Municipality, submitted on 28 November 2023.

The study covered two main topics: 1) General overview of various energy storage technologies, 2.) Technical simulation and cost comparison of two energy storage scenarios at four PoS (i.e., Stellenbosch, Cloetesville, Franschhoek and Drakenstein).

The general overview of various energy storage technologies concludes by recommending that the primary focus in the short-term should be BESS.

The technical simulation and cost comparison was based on two scenarios which were applied separately to each PoS:

- "load curtailment" approach whereby a solar PV system was coupled with a BESS. The BESS is charged with electricity generated by the solar PV system (i.e., not charged from the grid). The solar PV and BESS provide an effectively continuous discharge which reduces the demand at the PoS by a fixed percentage on a continuous basis, depending on the Stage of load shedding. Two system sizes were assessed, one based on continuous Stage 2 load shedding and the other based on continuous Stage 4 load shedding.
- "load shedding" approach whereby a BESS was sized to be charged by the grid and to discharge and deliver the full load requirement per PoS for a specific period of time during a scheduled load shedding window. Two system sizes were assessed, one based on Stage 2 load shedding schedule and the other based on Stage 4 load shedding schedule.

A basic LCOE calculation was undertaken to compare the various scenarios. The LCOE of the "load curtailment" scenarios were consistently lower for all supply points and for both Stage 2 and Stage 4 scenarios. This LCOE result is primarily because the "load curtailment" systems are used more often / discharge more energy than the "load shedding" scenarios and therefore the denominator in the LCOE equation (energy) is larger (i.e., not because they have a lower capital cost). When both scenarios are essentially achieving the same outcome of "eliminating Stage 2 and Stage 4 load shedding", it could be misleading to conclude that the "load curtailment" scenarios are more economically viable, since those scenarios require much higher capital cost than the "load shedding" scenarios.

The study separately calculates the cost of electricity to charge the BESS for the "load shedding" scenarios and separately calculates the savings that might be achieved by assuming that excess solar energy from the "load curtailment" scenarios reduce consumption from Eskom. However, these figures are not combined with the LCOE, making it difficult to determine which scenario / approach is the most economically viable for the Municipality.

The Options Analysis considered in **Section 4** of this feasibility study report re-evaluates the technical solutions to meet the Municipality's needs and objectives.

3.4 ALIGNMENT OF WCG AND MUNICIPAL STRATEGIC OBJECTIVES

3.4.1 WCG AND MUNICIPAL MoU

The Department and the Municipality entered into an MoU in January 2024, with the objective of:

- Facilitating cooperation and collaboration between the parties towards exploration, identification, funding, development and implementation of initiatives and projects that will lead to improved energy resilience of the Municipality and the Province.
- Facilitating collaborative provision, pooling or securing of resources to enable the implementation of jointly approved renewable energy projects; and
- Enabling the WCG to prioritise support to those candidate municipalities that are willing to collaborate and work with the WCG in preparing, developing, implementing, and maintaining renewable energy projects.

The MoU sets out the principles that the parties are committing to which include amongst other principles:

- To work collaboratively on areas of mutual interest relate to energy resilience.
- Recognise that while the WCG sets the strategic direction and plans for energy resilience in the Province and is responsible for driving the economic recovery component of the Province's recovery plan, the Municipality has the constitutional mandate to ensure that all citizens have access to affordable and safe energy services and drive or support local economic development.
- Commit to provide, pool or jointly secure resources to enable the implementation of jointly approved projects.

It also sets out responsibilities of each party and is set to terminate on 31 June 2025.

3.5 PROJECT'S CONTRIBUTION TO GOVERNMENT POLICIES

3.5.1 THE STATE OF THE NATION ADDRESS, 2020

A key turning point for the electricity supply industry was announced by President Cyril Ramaphosa ("**the President**") in his February 2020 State of the Nation Address ("**SONA**"), following the resumption of loadshedding in 2018 and the increased level thereof in 2019. The President stated that government was planning to rapidly and significantly increase generation capacity outside of Eskom. Municipalities in good financial standing would be permitted to

procure their own power from IPPs as one among other means to resolve electricity constraints.

3.5.2 AMENDMENTS TO THE NEWGEN REGULATIONS, 2020

Presumably to give effect to the President's announcement in the SONA 2020, the NewGen Regulations were amended with effect from 16 October 2020, to provide for municipal procurement or purchase of new generation capacity. These amendments to the NewGen Regulations are discussed in detail in paragraph 1.3 of **Annexure B** of this feasibility study report.

3.5.3 PRESIDENTIAL ENERGY ACTION PLAN, 2022

In his address to the nation on 25 July 2022, the President announced a bold set of actions to address load shedding and achieve energy security, collectively known as the Presidential Energy Action Plan.

The National Energy Crisis Committee ("**NECOM**") was subsequently established by the President, to oversee the implementation of five (5) key interventions:

- Fix Eskom and improve the availability of existing supply.
- Enable and accelerate private investment in generation capacity.
- Accelerate procurement of new capacity from renewables, gas and battery storage.
- Unleash businesses and households to invest in rooftop solar.
- Fundamentally transform the electricity sector to achieve long-term energy security.

NECOM operates through approximately eight workstreams, in each case represented by officials from affected government departments, Eskom and other stakeholders as appropriate. Each workstream meets regularly to report on progress.

The Project, if implemented, would contribute to improving the availability of supply, enabling and accelerating private investment in generation capacity, and acceleration of the procurement of new capacity from renewables and possibly battery storage.

3.5.4 INTEGRATED RESOURCE PLAN

The Integrated Resource Plan ("**IRP**") is defined in the ERA as "*a resource plan established by the national sphere of government to give effect to national policy*". The IRP is thus a national government policy developed by the Minister of Mineral Resources and Energy ("**the Minister**") (after consultation with NERSA, Eskom and other stakeholders), aimed at forecasting long-term electricity demand and detailing how this demand should be met in terms of generating capacity, type, timing and cost.

The IRP is only referred to in two sections of the ERA –

- firstly, in section 4 dealing with the powers and duties of the Regulator, where it is stated that the Regulator must “...(iv) issue rules designed to implement the national government’s electricity policy framework, the integrated resource plan and this Act”;⁵ and
- secondly, in section 10(2)(g) of the ERA, an important provision in practice which states that any electricity licence application required under the Act, must include: “evidence of compliance with any integrated resource plan applicable at that point in time or provide reasons for any deviation for the approval of the Minister”.

The currently operational IRP, published in 2019 (“**2019 IRP**”), includes (at Table 5) –

- an allocation for “Other (Distributed Generation, CoGen, Biomass, Landfill) of 500 MW per year from 2023 to 2030”; and
- an allocation for solar PV which differs from year-to-year, but which amounted to 6 000 MW uncommitted capacity at the date of publication of the 2019 IRP. That 6 000 MW has since been allocated to IPP procurement programmes, through Ministerial determinations in terms of section 34 of the ERA.⁶

The term ‘distributed generation’ is defined in the 2019 IRP as “*small-scale technologies to produce electricity close to the end users of power*”. The 2019 IRP provides that the annual allocation for distributed generation relates to projects of between 1 MW and 10 MW.

The IRP is a planning tool and does not constrain public or private sector participants in the electricity supply sector from establishing new generation capacity beyond the MW capacity provided for therein, subject to section 10(2)(g) of the ERA which requires that in order for NERSA to license generation outside of the IRP, Ministerial approval is required.

A proposed Integrated Resource Plan, 2023 (“**2023 draft IRP**”) was published for public comment on 4 January 2024. The deadline for public comments was 23 February 2024, thereafter, extended to 23 March 2024. Table 2 in the 2023 draft IRP, titled “Emerging Plan from Horizon One Analysis”, indicates a substantial amount of “unserved energy” for the period up to 2030 (which is Horizon One), after taking account of current new generation capacity projects. The 2023 draft IRP has not yet been published in final form.

⁵ Rules to give effect to this provision have to date not been made by NERSA.

⁶ GN 1015 published in Government Gazette 43734 dated 25 September 2020, and GN 3257 published in Government Gazette 48402 dated 6 April 2023.

3.5.5 CLIMATE CHANGE AND DECARBONISATION

The Project, if implemented, would contribute towards South Africa achieving its Nationally Determined Contributions (“**NDCs**”), that have been made in terms of the United Nations Framework Convention on Climate Change and the 2015 Paris Agreement.

It also has the potential to supply businesses within the Municipality with a means to avoid liability in terms of the Carbon Tax Act, 2019 (Act No. 15 of 2019) (“**Carbon Tax Act**”), through the supply of electricity generated without the emission of greenhouse gases (“**GHG Emissions**”).

South Africa also has a Climate Change Bill that has been passed by the National Assembly and by the National Council of Provinces, and is awaiting its assent into law. The Climate Change Bill, once enacted, will introduce mandatory carbon budgets that will cap CO₂ emissions. Such carbon budgets will allow government to set sectoral emission targets and allocate carbon budgets to companies with significant GHG Emissions.

The Western Cape Climate Change Response Strategy has a vision to be a net zero emissions and climate resilient province by 2050.

The Project, if implemented, will provide businesses within the Municipality with a means to source electricity generated without GHG Emissions, thereby providing the potential to achieve (or reduce the extent to which they exceed) sectoral emission targets and allocated carbon budgets.

Further, the Project, if implemented, will align with other aspects of South Africa’s climate change policy that seek to reduce GHG Emissions and decarbonise South Africa’s energy mix away from sole reliance on fossil fuels, including, among others, the Low Emissions Development Strategy 2050 and the Just Energy Transition Framework.

3.6 ABILITY AND CAPACITY OF MUNICIPALITY TO IMPLEMENT THE PROJECT AND MONITOR COMPLIANCE FOR THE DURATION

3.6.1 COMPLEXITY OF THE PROJECT

Following the announcement of the President in the 2020 SONA that municipalities in good financial standing would be permitted to procure their own power from IPPs, several municipalities have embarked on developing plans to procure power from IPPs with varying degrees of success. Some of the challenges faced by municipalities are insufficient experience and capacity to develop an appropriate procurement programme and uncertainty in respect of the regulatory requirements to successfully implement a power procurement programme.

The Project will be a first of its kind for the Municipality and therefore it is critical that the Municipality have the appropriate structures, capacity and support in place during each phase of the Project's lifecycle. Table 3-3 below outlines some of the key activities that will need to be undertaken by the Municipality in each of the Project's phases. This does not include the activities that would have to be undertaken by the IPP that include the relevant development, construction and operational activities of a power plant.

It is important for the successful development and implementation of the Project that the Municipality becomes intimately involved with all aspects of the Project phases as outlined below. The Municipality should also take ownership of the stakeholder engagement process and commit the necessary resources as required.

Table 3-3 Project activities and expertise required over the Project lifecycle

Project phase	Activities and expertise required
Project development – Feasibility	<ul style="list-style-type: none"> • Technical expertise required to clearly identify the load demand required by the Municipality; the grid capacity limitations; understand various energy generation and storage performance and dispatch scenarios; understand the implications of various energy generation and storage scenarios within the context of NRS048-9; assess the impact on Eskom's electricity supply agreements; guiding the preparation of all technical due diligence work and guiding the preparation of the feasibility study. • Financial expertise to guide the preparation of the financial modelling in addressing affordability and value for money considerations guiding the preparation of all input into the feasibility study. • Legal expertise to guide the transaction advisors on applicable municipal policies and procedures, including in relation to required regulatory processes, and which need to be considered in the development of the Project. Legal and Supply Chain Management ("SCM") divisions of the Municipality can provide input which will be important for purposes of guiding the preparation of legal due diligence work and in particular the procurement plan, the timing aspects of which are closely linked to existing municipal practices and procedures. • Economic development expertise to guide the socioeconomic objectives to be considered during the procurement phase.
Project development – RFP preparation	<ul style="list-style-type: none"> • Preparation of appropriate functional technical, legal, financial, and economic development specifications. • Preparation of technical performance metrics and associated guarantee and liquidated damage mechanisms. • Preparation of the contractual risk allocation within the agreements and associated project agreements that will include a PPA and may include a Direct Agreement and Implementation Agreements. • Preparation of appropriate procurement documents that may deviate from the standard terms of contract utilised by the Municipality. • Stakeholder engagement on commercial aspects (risk allocation) to the extent appropriate.

	<ul style="list-style-type: none"> • Approval of procurement documents and draft contracts prior to the issue of a request for proposals to the market. • Advertisement and issue of procurement documents.
Project development – Bid evaluation up to appointment of preferred bidder(s) and support to Financial Close	<ul style="list-style-type: none"> • Engaging with bidders during the bidding phase (in particular, in relation to grid access requests). • Administer bid registration system and respond to bidder clarification questions. • Receipt, recording and safe keeping of bidders' responses. • Evaluation of bidders' responses against the functional criteria set out in the procurement documents. • Evaluation, ranking and scoring of bidders' responses against price and specific goal requirements. • Governance approval of contract award decisions. • Notification of preferred bidders, reserve bidders (if applicable) and unsuccessful bidders. Preparation of letters of award with appropriate conditions. • Finalising all technical and financial schedules to the PPA. • Preparing all requests for approvals and consents from governmental authorities. • Support the section 33 approval process, including preparation of documents for public participation process, and submission to Provincial Treasury and National Treasury, amongst others. • Support in relation to Municipal Council approval in terms of section 33 of the MFMA. • Signature of project agreements including PPAs. • Support in fulfilment of conditions precedent to the agreements, and process to financial close.
Construction, commissioning and operations phase	<ul style="list-style-type: none"> • Vendor registration to get IPP sellers onto the Municipality's payment system. • Contract management throughout the construction and operating periods, including receipt of notices from IPP sellers, monitoring of performance against contracted timelines to commercial operation date, participation in testing and commissioning as required, issue of notices and letters in the event of non-performance or defective performance against contract timelines, application of penalties for late commercial operation and/or poor system performance. • Implementing appropriate systems to allow for metering of electricity and, where appropriate, dispatch instructions to generation and storage systems. • Monitor compliance with any contractual economic development conditions and levy penalties for under-performance that is not satisfactorily remedied. • Managing claims and disputes raised by IPP sellers under the PPA. • Managing invoicing and payments per the PPA payment terms. • Reporting any PPA contingent liability in annual financial statements.

3.6.2 ABILITY AND CAPACITY OF MUNICIPALITY TO SUPPORT THE PROJECT

3.6.2.1 Overview

Various support and governance structures have been put in place to promote the implementation of the Project through its phases as outlined below and in **Figure 3-1**.

- A MoU between the Municipality and Department as described in **section 3.4.1** of this feasibility study report has been put in place where the Department has given its commitment to provide support towards the Municipality's energy projects that are aligned to the WCGs ERP.
- The IDP has determined the Directorate: Infrastructure Services and the Department: Electrical Services as the responsible Directorate and Department within the Municipality to develop alternative energy. The Director, Infrastructure, is the designated Project Officer for the Municipality. The Municipality Project team is presented in **Figure 3-2** with details of the team's roles and responsibilities, skills and experience outlined in **Table 3-5**
- The Department facilitated the appointment of a transaction advisor, the TA Team, to support the Municipality for the next three (3) years.
- The Department facilitated the appointment of a Project Manager as key liaison and interface between the TA Team, the Municipality, and the Department.
- Where a lack of capacity exists in terms of skills and resources, the Municipality would have access to professional services providers. A MoU is in place with the University of Stellenbosch and CSIR. The Municipality has also appointed Lyners to provide technical advisory services where required.
- A Project Steering Committee ("**PSC**") has been established to oversee the implementation and development phase of the Project. The members of the PSC are outlined in **Table 3-8**.

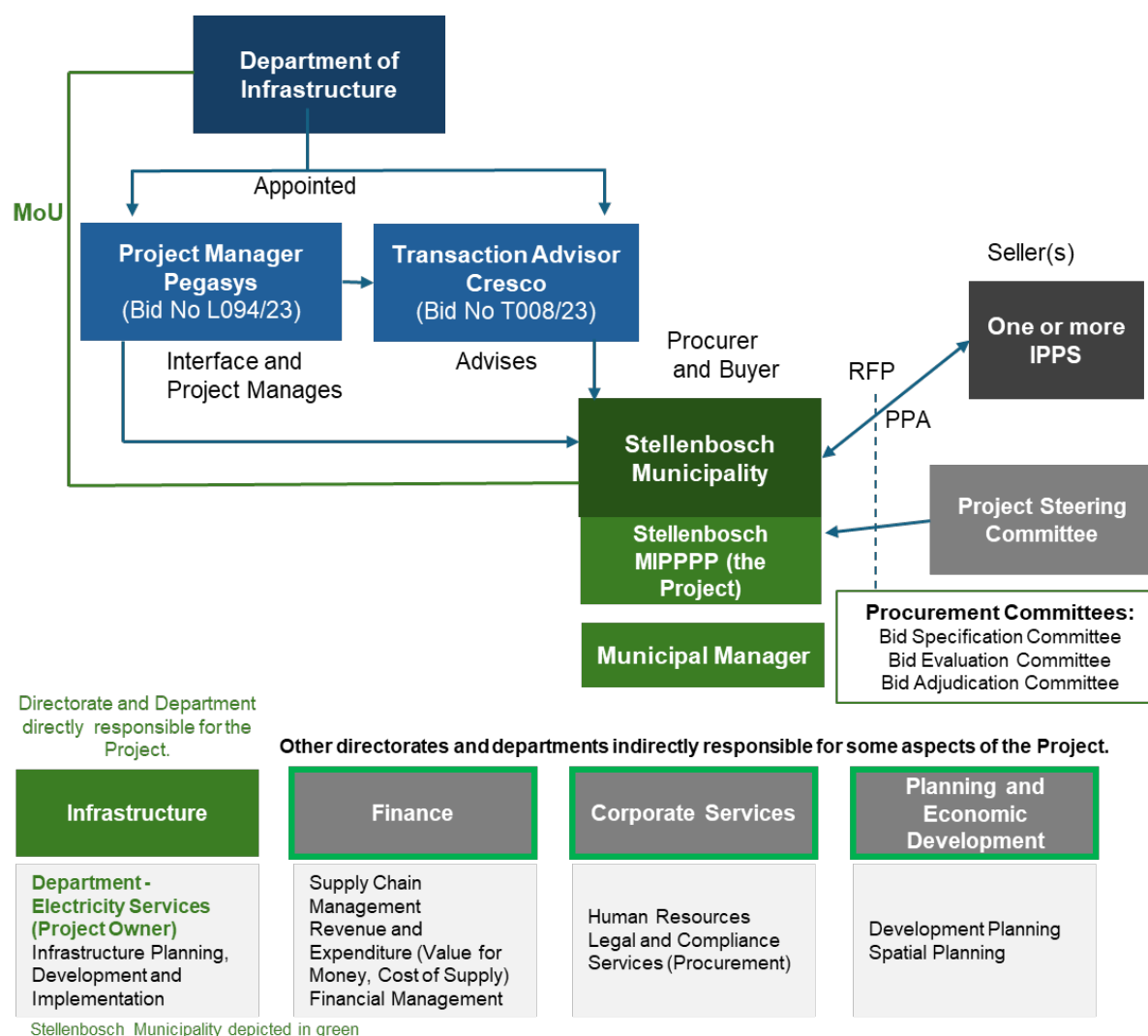


Figure 3-1 Key parties responsible in the development of the Project

Table 3-4 sets out the roles and responsibilities of the key parties responsible for the execution of the Project.

Table 3-4 Roles and responsibilities of key parties responsible for the Project

Support	Roles and Responsibilities of the key parties
Department of Infrastructure	<ul style="list-style-type: none"> Provide support towards the Municipality's energy projects that are aligned to the WCGs ERP. Provide input into changes in scope and approval thereof. Contract management of TA Team and Project Manager. Monitor progress of the TA Team and provide support where appropriate. Facilitate stakeholder management with key WCG and National Government stakeholders.
Municipality – Accounting Officer	<ul style="list-style-type: none"> Provide strategic direction and vision throughout the project phases. Appoint bid committees and approve the contract award.

Support	Roles and Responsibilities of the key parties
(Municipal Manager)	<ul style="list-style-type: none"> • Build and secure support for the Project. • Ensure capacity to manage, communicate, report and disseminate information to stakeholders. • Provide the Project Manager with suitable delegations and responsibility for project management and include him/her in the senior & top management team of the Municipality. • Allocate suitable project resources, including budgets and personnel, to the Project Officer. • Put in place appropriate reporting lines and governance structures.
Municipality – Project Team Directorate: Infrastructure and Department Electricity Services	<ul style="list-style-type: none"> • Provide the required technical information and inputs for the TA Team to develop and assess various technical solution options. • Engage with and provide feedback on the viability of the proposed technical solution options, including consideration of how the technical solutions will interact with and impact on other projects in respect of load shedding and/or load curtailment initiatives. • Respond to grid access requests from IPPs during the procurement phase, including assessment of grid capacity and grid connection works required. • Review, approve and oversee the design and construction of grid connection works carried out by the selected IPP/s. • Take-over operation and maintenance of grid connection infrastructure constructed by the IPP/s. Prepare updated single line diagrams for the grid infrastructure, updated models of the grid, asset register, etc.
Project Manager - Pegasys	<ul style="list-style-type: none"> • Key liaison and interface between the TA Team, the Municipality, and the Department. • Providing key information relevant to the Project. • Facilitating and scheduling stakeholder meetings. • Oversee, direct, project manage, quality assure, and vet the work and deliverables of the TA Team in a cost and time optimal manner. • Structure and implement a knowledge management process for the collation, access, and transfer of learnings. • Facilitate and drive the delivery of the TA Team for the contemplated inception, feasibility, procurement and contracting phases of the Project. • Consider all the tasks, activities and deliverables associated with the respective phases.
TA Team Cresco Advisory Consortium	<ul style="list-style-type: none"> • Design, manage and execution of the Project in accordance with the terms of reference of appointment which includes the feasibility and procurement phases providing support up to financial close of IPP projects. • Reporting of the project's progress and escalation of relevant issues through the appropriate channels. • Quality management of project deliverables.

Support	Roles and Responsibilities of the key parties
Project Steering Committee	<ul style="list-style-type: none"> • Provide guidance, advice, support and strategic project oversight. • Monitor project implementation (budget, time, risks and quality of the deliverables and outcomes). • Deliberations and decision making. • Provide input into changes in scope. • Provide input into the project management processes – specifically, project risk, communications, and stakeholder management. • Resolve issues and oversee negotiations with stakeholders on any material matter. • Ensure accountability of the key members responsible for implementation of the Project.
Procurement Committees	<ul style="list-style-type: none"> • The Municipality's SCM Policy provides, inter alia, that the Municipality must establish a three-tier bid committee system comprising: <ul style="list-style-type: none"> ▪ a bid specification committee; ▪ a bid evaluation committee; and ▪ a bid adjudication committee.

3.6.2.2 Municipality Project Team

Figure 3-2 outlines the Municipality Project Team responsible for the implementation of the Project.

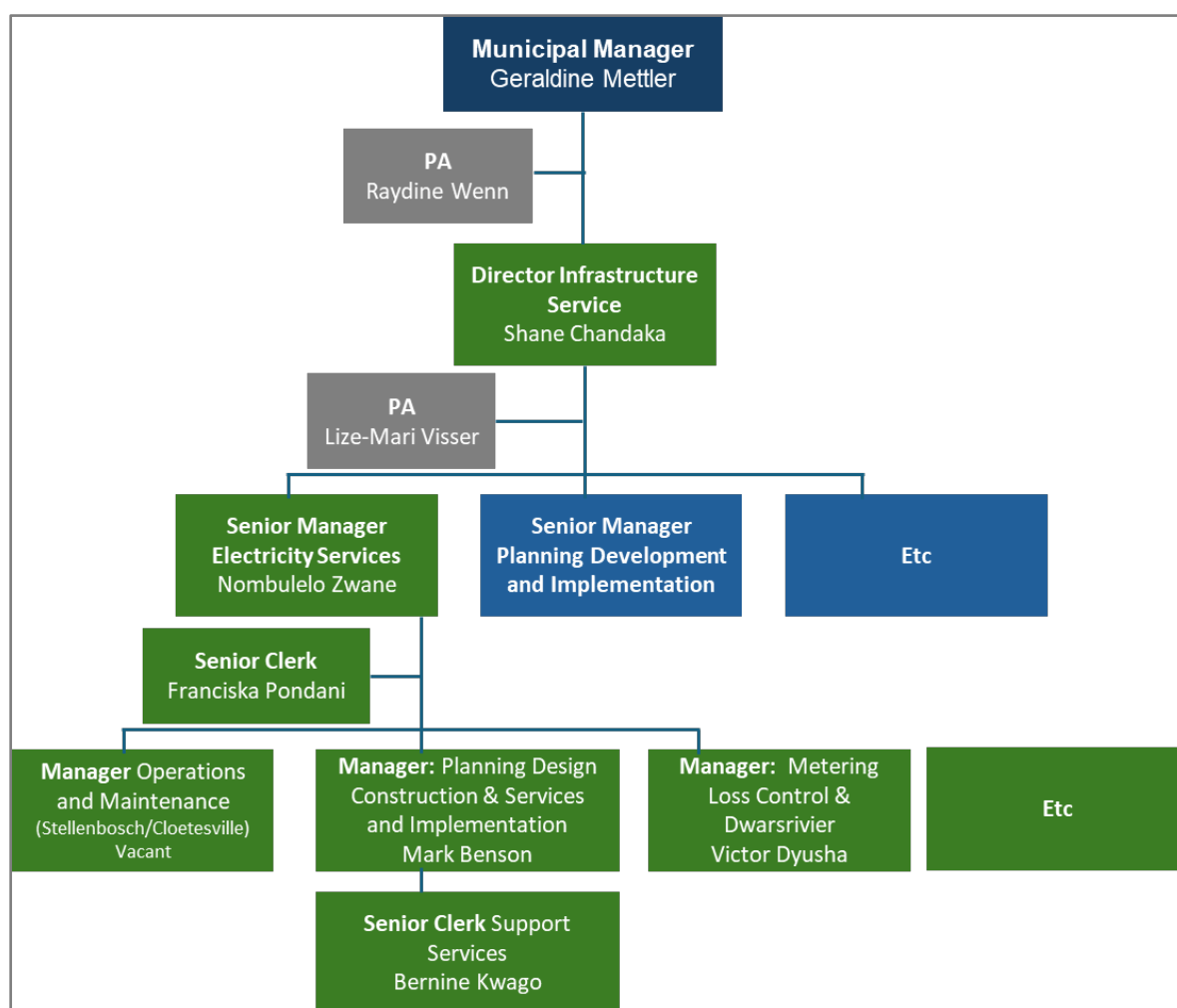


Figure 3-2 Organogram of the Municipality Project Team and reporting lines

The Municipality's Project Team's role, qualification and years' experience are outlined in **Table 3-5**.

Table 3-5 Roles, qualification, and years' experience of the Municipality Project Team

Team member & title	Role	Qualifications	Years of relevant work experience	Years with Municipality
Shane Chandaka	Project Officer (Sits on PSC and provides guidance where issues arise)	B.Sc Civil Engineering MBA	21	2
Nombulelo Zwane	Project Leader (Part of bi-weekly meetings and guides the PM and TA Team on technical matters)	B.Tech Electrical Eng	20	18
Mark Benson	Manager: Design Construction and Services	B.Tech Electrical Eng	25	5

Team member & title	Role	Qualifications	Years of relevant work experience	Years with Municipality
	(Provides technical support to the Project Leader)	B.Tech Project Management		
Victor Dyusha	Manager: Metering, Loss Control & Dwarsriver (Provides technical support to the Project Leader)	B.Tech Electrical Eng	18	17
Vacant	Manager: Operations & Maintenance			
Myra Francis	Senior Manager: Infrastructure Planning, Development & Implementation (Provides technical support to the Project Leader)	B.Tech Project Management	10+	10+

Table 3-6 Biographies of the Municipal Project Team and Project Manager

Municipality Project Team biographies

Shane Chandaka

“Qualified Civil Engineer (BSc Engineering (Civil).) Currently the Director of Infrastructure Services at Stellenbosch Municipality, responsible for the full Electro-technical services, Water and Wastewater Services; Roads, Transport and Stormwater, Solid Waste and Development Services portfolios. Also responsible for the associated design, programme management, funding and construction management of both the Capital and Operational portfolios.

Served as the Director of Infrastructure at the Provincial Treasury as well as worked for nine years for the Development Bank of Southern Africa’s Development Fund. Further to this, my roles as Director: Human Settlements Planning and Director of Implementation at the Provincial Department of Human Settlements, together with an MBA qualification, enabled to innovatively drive and manage strategic portfolios, as well as large-scale built environment projects which cut across all spheres of government including private sector stakeholders. The range of initiatives and divisions managed also included urban waste management, renewable energy sectors, and public private partnerships among others.

Nombulelo Zwane

Nombulelo Zwane has over 19 years of experience in the Electricity Engineering field. Years of experience spread over Eskom, the Municipality as well as the Education Sector. The greater of her

years of experience in the Municipality holding positions in Middle Management. She holds qualifications in the Electrical Engineering as well as the Industrial Engineering (B. Tech Electrical Engineering and B.Tech in Quality)

Nombulelo Zwane plays an active role in the AMEU and is part of the Good hope branch leadership. She is a member of the Executive Council of the AMEU.

Currently she is the Head of the Electricity Services Department at Stellenbosch Municipality.

Mark Benson

Mark is currently employed at Stellenbosch Municipality as the Manager: Planning Construction, Design and Services heading up the section, managing 32 staff, assets, equipment and plant.

Mark is a seasoned professional previously managing his own consulting engineering practice. Mark also headed up the electrical division of Bigen Africa in the Cape Town office that looks after the Western and Eastern Cape. He has extensive experience in construction, design, specification, tender preparation, and construction monitoring of various Electrical Infrastructure and building services projects to SANS and other relevant standards. He has worked in West Africa, Abuja Nigeria as an Expatriate Electrical Engineer for Aggreko International Power Projects (UK) Ltd based in Jebel Ali, Dubai. Ensuring that AIP equipment is maintained and operated as per the standard Aggreko procedures and that the site is operated as per HSE standards. As the Electrical Site Engineer, Mark was responsible for all electrical maintenance on all power and control plant required to run 55MW generation plant on the site on a 24/7 hour basis.

Victor Dyusha

Victor is an Electrical Engineering Technologist.

He is an experienced Electrical Engineering Technologist with 17 years of comprehensive experience in the electrical engineering field. Proven track record of success in managing various aspects of electrical distribution systems within a small municipality. Skilled in personnel management, financial management, and communication, with a strong focus on maintaining high standards of operational efficiency and regulatory compliance. He holds a BTech Degree in Electrical Engineering (Heavy Current) and is adept at leveraging technical expertise to drive projects to successful completion while ensuring safety and reliability.

Pegasys Project Manager - Deon Louw

Deon Louw is currently the part time Person responsible for Safety Matters as per the OHSA GMR2(1) regulation and also the Project Manager at Stellenbosch Municipality for the 50MW IPP project, co-funded by the Western Cape Government. He was the Project Manager for Alternate Electricity Generation for the Stellenbosch Municipality since 2020. Prior to this he was the Director

for Infrastructure Services at this Municipality. Before the Stellenbosch Deon spent 5 years as Executive Manager: Infrastructure Services of the Drakenstein Municipality.

Deon, an electrical engineering student from University of Stellenbosch, commenced his career at industries such as Iron & Steel, Chemical and Consulting before entering the Municipal Arena, which included the City of Cape Town and its subsidiaries before that. In 2004 Deon moved to EDI Holdings (Pty) Ltd to work on the creation of Regional Electricity Distributors. At EDI Holdings Deon was part of the National Legal Team. Deon was also the Chairperson of the AMEU Executive Legal Team at this stage. Deon returned to municipalities in 2012, when he joined Overstrand Municipality and thereafter the positions mentioned above. Deon has 27 years of municipal experience as head of a Directorate or a Department and has 43 years of experience related to municipalities.

Deon is a past President of the South African Revenue Protection Association (SARPA) and a past member of the executive of the Association of Municipal Electricity Utilities (AMEU). He is a registered professional engineer; he is a qualified Competent Person in terms of the OHSA; he is a member of the Institute of Municipal Engineers of SA (IMESA) and a member of the South African Institute of Electrical Engineers (SAIEE).

From **Table 3-6** above it can be seen that the Municipality has individuals with substantial electrical engineering experience. There is a vacancy in a key position being that of Manager: Operations & Maintenance that needs to be filled.

3.6.2.3 *Transaction Advisory Team*

Table 3-7 Biographies of the TA Team

TA Team biographies

Francois Viljoen

Francois provides clients with Financial Advisory and Transactional Advisory services in the power and infrastructure sectors. Projects utilising a number of technologies including, Coal fired, Gas fired, Hydro, Wind, Solar and Co-generation form part of the project portfolio he has worked on recently. Other projects include the investigation of power wheeling opportunities both in South Africa and cross border, transmission corridors and cleaner fuel switching. His experience also includes the regulatory and licensing environment in SADC. Francois is a qualified Chartered Accountant whose pre-Cresco career includes 5 years at IDC and 6 years at Eskom with the responsibility of providing financial advisory to the groups' cross border activities and raising Export Credit finance for the Eskom build programme. Francois then moved into the Project Development Department and was given the responsibility of developing and project managing the first IPP procurement programmes in South

Africa, namely the Pilot National Cogeneration Programme and Medium-Term Power Purchase Programme. Years Relevant Experience: 26 Years

Vanessa Snyman

Vanessa is a qualified Chartered Accountant and has over 27 years of experience in areas including corporate and project finance, procurement of PPPs and IPPs, transaction advisory, feasibility studies, project development, financial modelling, energy tariff structuring and government capacity building.

Over the last 17 years her focus has been on the energy sector when she first joined an IPP Development company in 2007 focussing on project finance and financial modelling. After this she has worked in an advisory capacity with a focus on advising government on energy procurement and the private sector on project development and transaction advisory services. She has advised the IPP Office since 2013 on multiple procurement programmes in developing the procurement documents, bid evaluation and providing support up to commercial and financial close. She also advised the IPP Office on other initiatives including evaluating options for the institutionalisation of the IPP Office, assessment of refinancing of IPPs debt structures and its impact on tariffs, and more recently assisting the IPP Office in assessing the Government Guarantee Support Framework.

Johan Louw

Qualifications: B. Agric. Admin. (Degree), CAIB (SA) (Diploma) now a B.Com Banking Degree and Master of Business Administration (MBA) (Degree)

Johan is a high-level PPP / IPP lead transaction advisor with over 38 years of experience working as a lead for both private and public sector transactions, restructuring, finance, and strategy development advisory projects. Extensive experience running sector leading projects across Southern Africa, with noteworthy knowledge across the technical, legal, financial, socioeconomic development, organisational development and human resource aspects of project development and implementation.

Years Relevant Experience: 38 Years

Pippa Reyburn

Years' relevant experience: 29 years

Qualifications: BA (UCT); LLB (UCT); LLM (University of Toronto)

Pippa Reyburn is an Executive in ENSAfrica's Public Law practice. She specialises in public procurement, public sector financial management, infrastructure projects (including public private partnerships), as well as structures of government, public sector corporate governance and

transactions, and constitutional and administrative law. Some of Pippa's other areas of experience include energy law, municipal law and education law.

Pippa is an expert in broad-based black economic empowerment (B-BBEE) advisory, regulatory and compliance, in particular as it applies in the context of public sector procurement and transactions across a wide variety of industries, in accordance with public procurement and B-BBEE legislation. Pippa advises government clients, international development finance institutions and the private sector. Since 2010, Pippa has been one of the lead legal advisors to the South African government on its Renewable Energy Independent Power Producer Procurement Programme and other independent power producer procurement programmes conducted by the Department of Energy. Pippa has acted for corporate clients and the public sector on regulatory matters pertaining to energy, corporatisation, privatisation and restructuring, electronic communications, broadcasting and water, and has assisted a variety of African clients in applying for broadcasting, telecommunications service and electricity-related licences. Pippa's experience includes legislative drafting, the drafting and interpretation of procurement documentation and policies, and the resolution of procurement-related disputes. She is also a commissioner of the small claims court in Alexandra, South Africa. She is the co-author of a chapter on public procurement in Constitutional Law of South Africa. She holds training workshops for various clients and young lawyers participating in the Black Lawyers Association's Commercial Law Programme on the right of access to information, administrative justice, public sector law, as well as for financial institutions transacting with the public sector. Pippa is also recognised as a leading/recommended lawyer by:

- Chambers Global Guide 2023, 2022, 2021, 2020, 2019 – Public Law (South Africa)
- IFLR1000 Women Leaders 2022, 2021, 2020, 2019, 2018
- IFLR1000 Financial and Corporate Guide; (including Energy and Infrastructure), Project development – 2023, 2022, 2021, 2020, 2019, 2018, 2016, 2015 (South Africa)
- Best Lawyers® 2023, 2022, 2021, 2020, 2019, 2018, 2017 – Corporate Law, Administrative and Public Law; 2023 – Public Finance Law; 2020 – Lawyer of the Year (South Africa)
- Who's Who Legal 2019, 2018, 2017, 2016, 2015 – Government Contracts (South Africa)
- Who's Who Legal 2014, 2013, 2012, 2011, 2010, 2009 – Public Procurement (South Africa)

James Brand

Years' relevant experience: 20 years

James Brand is an executive at ENS in the Natural Resources and Environment practice. He specialises in advising the agribusiness sector and has particular expertise in advising on water law.

This includes advising clients on the process of verifying existing lawful water use entitlements, water use licence requirements, water use disputes, wastewater authorisation, water transfers and drought mitigation as well as representing clients in their dealings with the Department of Water and Sanitation and the Blue Scorpions. He has acted for international and local clients as well as government entities, national parks and nature reserves in a number of industries and sectors including mining, nuclear energy, construction, agriculture and aquaculture. James' experience also includes advising on a variety of environmental law issues in accordance with the National Environmental Management

Waste Act 59 of 2008 and other related legislation. In this regard he has been involved in representing interested and affected landowners in opposition to potentially environmentally damaging urban and rural developments, including landfill sites, harbour developments, illegal dam structures and coastal marine outfall pipes. He has also represented a number of industrial clients in their dealings with the Department of Environmental Affairs and the Green Scorpions. James also advises clients in respect of waste management and land-use planning related matters and has advised both developers and funders of renewable energy projects under the South African government's renewable energy procurement process. James is recognised as a leading/recommended lawyer by Best Lawyers® 2022, 2021, 2020, 2019 – Environmental (South Africa)

Enriko Fourie

Enriko is a professionally registered Civil Engineer (ECSA) with BEng (Civil) and MBA (Cum Laude) degrees. Work experience covers infrastructure financial advisory, development finance, advanced financial modelling; project management/development, as well as infrastructure engineering consulting and construction. Complementary experience includes part time lecturing (infrastructure project finance) at a local Business School. Finally, he has also acted as Non-Executive Director on various company boards.

Paul Jackson

Paul Jackson is an economic development expert, focused on creating an enabling environment for sustainable private sector growth and job creation. He has advised corporations, governments, state-owned companies and donor agencies on improving impact, sustainability and value for money.

Since 2014, Paul has provided socio-economic advice to the energy sector. This advice has included advising the Independent Power Producer Office on RFP design and bid evaluation; assisting renewable energy project owners with the economic development aspects of their utility-scale project bid submissions and the financial close thereof; economic development due diligence on behalf of lenders.

He has 19 years' work experience, with 12 years of consulting experience. He has work experience in South Africa, Lesotho, Namibia, Kenya, eSwatini and the USA.

Steven Hawes

Over the past two decades, Steven has advised on strategic transformational projects in the energy, infrastructure and sustainability sectors.

Steven is a trusted advisor to senior leaders in Economic Development, Infrastructure Development and Funding, technology localisation, Renewable Energy Project development and the broader B-BBEE sector.

Steven has been involved as a Lead Advisor in the full project cycle of South Africa's IPP programme since inception, including Bid Submission; Project Compliance Monitoring and Evaluation; Transaction Advisory; Lender's Due Diligence; and B-BBEE aspects of REIPPP projects.

Prior to establishing ED Platform, Steven was a director of Collective Wisdom Advisory Services and the Manager of Empowerdex's Energy and Infrastructure division.

Maloba Tshehla

Maloba's experience spans utility-scale clean energy to embedded generation, clean-tech innovation through to supporting green economic growth to deliver economic opportunities and sustainable economic development at a regional and national scale.

Maloba has had extensive experience providing clients strategic advisory services spanning various topics – from technology localization to economic development, including development of socio-economic development plans for planned infrastructure projects.

Maloba has also provided strategic industry inputs in his roles within the South African Photovoltaic Industry Association (SAPVIA) over the past 4 years – occupying positions such as Spokesperson, as well as SAPVIA representative in the South African Renewable Energy Masterplan (SAREM) development process.

Andrew Johnson

Andrew is a mechanical engineer and MBA graduate with sixteen years of experience in the energy industry. His specialisations include power generation, renewable energy, energy storage and energy advisory.

He has successfully worked in various roles such as project manager, engineering manager, mechanical engineer, owner's engineer, technical advisor, and transaction advisor. In these roles he has led and contributed to the delivery of carbon neutral energy strategies, power supply options studies, energy mix studies, conceptual and preliminary designs, pre-feasibility and bankable feasibility studies, EPC and O&M contracts and specifications, tender evaluations, detailed design reviews, due diligence reviews, and development of project agreements (such as power purchase agreements, project development agreements, and fuel supply agreements). Andrew's project experience spans multiple power generation technologies including battery energy storage; renewable energy technologies including solar photovoltaic (PV), solar thermal, wind, and biomass; and conventional thermal power technologies, including open cycle and combined cycle gas turbines, reciprocating engines, and coal-fired power plants. He has worked on projects in many countries across Sub-Saharan Africa, Australia, Asia, and the UK.

Yusuf Coovadia

Yusuf's 15+ years of experience in the energy industry spans across engineering, project management, project development and procurement for multiple technologies including gas plants, boiler plants and renewable energy. Yusuf spent the first few years of his career as a design engineer and worked his way up the vocational ladder to commercial project engineer and eventually transitioned into a consultant for power generation and eventually, transactions.

As a Transaction Advisor for Tetra Tech, Yusuf was part of the US Government's Power Africa Transactions and Reforms Program (PATRP). During his tenure at Power Africa, Yusuf was involved in advising on numerous renewable energy projects in Sub Saharan Africa, both through Governments and private IPPs. Adding to this, Yusuf's main responsibility was assisting Government's with their decision making based on understanding the technical, regulatory and financial risks and rewards of renewable energy projects. He has also been involved in the design and review of various types of feasibility studies and assessments for various projects.

Yusuf is currently working on various projects to advise clients on project development and procurement, technical feasibility and permitting activities, market positioning, and private sector power procurement.

Rabagolo Melesi

Rabagolo is a registered professional engineer with the Engineering Council of South Africa (ECSA). He has 16 years' experience and expert knowledge in transmission and distribution industry. His experience is focused on network strengthening and expansion planning, power system studies, demand and energy forecasting, generation integration studies, and generation capacity planning.

Rabagolo is fluent in energy capacity planning (OSeMOSYS), the use of power system simulation (i.e. DigSilent PowerFactory and Siemens PSS/E), demand and energy forecasting (PowerGLF), and the spatial analysis (ESRI ArcMap) tools. He has a wealth of experience in developing feasibility studies and the associated techno-economic benefits in formulating business cases. Rabagolo has also served as a technical adviser to the RSA REIPPPP for multiple programmes. Rabagolo has worked across the Southern African region in countries such as Angola, Botswana, Eswatini, Mozambique, Namibia, and Zambia; with limited experience in Tanzania, Sierra Leone and Nigeria. In addition to power system studies, Rabagolo provides additional skill sets in planning, transaction advisory and energy modelling disciplines.

Ntombi Magoro

Ntombi Magoro has more than 12 years' cumulative professional experience in both the public and private sector. She has managed municipal projects and has executed various related financial management/ audits/ accounting related work for small, medium-sized entities, local government as well as provincial government in terms of applicable reporting frameworks. She has thus gained relevant experience in technical competencies such as Municipal Budgeting, Municipal Entity

Formations, Municipal/ Provincial/ Government State-Owned Entity Audits, Account reconciliations, financial statement preparation, Revenue Cycle Management, Expenditure Cycle Management, Risk Management, Stakeholder Management.

In her current role she provides advisory support services where she has been involved in areas including Public Private Partnerships (PPPs), transaction advisory, general project advisory, project management, feasibility studies, the procurement of PPPs, Institutional alignment and restructuring. She is currently studying towards obtaining professional certification as a Certified Public Private Partnership Practitioner (CP3P).

3.6.2.4 Project Steering Committee

The PSC is comprised of the following members:

Table 3-8 Members of the PSC

Representative organisation	Member Names	Job Title
WCG DOI	Tim Parle	Project Owner
WCG DOI	Rabelani Tshikalanke Tim Parle	Project Manager (Up to May 2024) (From June 2024)
WCG DOI	Neil Joseph	Project Management advisory
WCG DOI	Adrian Rudolph	Project management support technical
WCG DOI	Siphokazi Mnyani	Project management support
WCG DOTP	Nishen Brijraj	Project technical oversight
Municipality	Geraldine Mettler	Municipal Manager
Municipality	Shane Chandaka	Director Infrastructure Services
Municipality	Kevin Carolus	Chief Financial Officer
Municipality	Nombulelo Zwane	Senior manager: Electrical Services
Municipality	Mark Benson	Manager: Planning Design Construction & Services and Implementation
Municipality	Annalene de Beer	Director of Corporate Services

Representative organisation	Member Names	Job Title
	Yolanda van den Berg	Head: Contract Management
WCG	Glenda Jeffries	Legal Services
WCG Department of Local Government	Enson Mangwengwende	Department Local Government
Pegasys	Deon Louw	Project Manager
TA Team Cresco Cresco Turner & Townsend Cresco Edward Nathan Sonnenbergs Osmotic Engineering Group ED Platform Turner & Townsend	Francois Viljoen Vanessa Snyman Johan Louw Enriko Fourie Pippa Reyburn Andrew Johnson Paul Jackson Ntombi Magoro	Overall Contract Lead TA Team Lead Municipal Specialist Finance Lead Legal Lead Technical Lead Economic Development Lead TA Project Manager

3.6.2.5 Any areas where a lack of capacity exists, in the Municipality Project Team or in the TA Team

The TA Team includes financial, legal, technical, municipal and economic development experts covering all required skills. It is not envisaged that additional skills would be required.

The Municipality Project Team depicted in **Figure 3-2** shows the current vacancies within the management structure of the Electricity Services Department.

The Municipality Annual Report 2022/2023 highlights a challenge in respect of staff shortages in the electricity department: “Staff shortages are impacting service delivery; although the impact is not experienced by the public, staff’s wellbeing is severely affected, which is a great concern to the department’s management. Even though the electricity infrastructure and customers have grown over the years, the staff complement has decreased.”

Section 3.7.4 and 4.5.4 specifies the technical interface and control requirements for the Project. The Municipality is in the process of undertaking an assessment of the system and human resource requirements in this regard and it is foreseen by the Municipality that four system operators and supporting staff would be required to operate the control room. The skillset of the system operators should include knowledge of and ability to manage embedded generation within the Municipal network.

3.6.2.6 A plan on how the lack of capacity will be addressed throughout the project phases

If a gap in the TA Team’s skills is identified during the Feasibility Phase this need will be discussed with the Department and Municipality and the appropriate skills procured to fill the gap.

The Electricity Services Department is currently following the Municipality's recruitment processes to fill the departmental vacancies.

Where a lack of capacity exists in terms of skills and resources, the Municipality would have access to professional services providers. A MoU is in place with the University of Stellenbosch and the CSIR. The Municipality has also appointed Lyners to undertake several technical studies.

3.6.2.7 The plans for skills transfer from the adviser to the project team at various stages of the project

The TA Team will not only bring skills and practical experience to the Municipality but also additional capacity to face the unusual, intensive, and non-recurrent workload that inevitably arises from implementing complex projects. The TA Team will endeavour to identify areas where the Municipality may be lacking the appropriate experience, specifically in respect of developing Municipal IPP projects.

The Project manager also has the responsibility to structure and implement a knowledge management process for the collation, access, and transfer of learnings.

Regular meetings will be arranged to provide the Municipality with the necessary support in developing those areas identified. The TA Team will also work shoulder to shoulder with the Municipality to enable, foster and implement the Project.

3.6.2.8 How staff turnover will be managed

The Municipality keeps detailed records of all vacant positions within a specific department. Consideration will also be given as to whether additional staff may be required to control the network and related systems that may be required. The Head of the department liaises with the Human Resources department for advertisement, screening, competency testing and interviews, from where a shortlist is compiled and ultimately a candidate appointed.

The recruitment process is governed by Municipality's policies and procedures to ensure the best candidate is chosen for the specific skillset. If a suitable candidate cannot be found for a specific position, the Municipality may target specific individuals in the market.

Recruitment of staff is an ongoing task. The average turnaround time from advertisement to appointment is approximately 6 to 12 months. To ensure that work can continue on projects during the requirement process, the Electrical Services Department structure allows for staff to be involved in all aspects of a project, thus ensuring continuity when staff resigns.

3.6.3 IDENTIFY AND ANALYSE AVAILABLE BUDGET

Capital budget allowances related to material energy infrastructure projects over the next three years are summarised in **Table 3-9**. Specific projects include alternative energy; landfill gas to energy; substation upgrades, and SCADA system upgrades.

Table 3-9 Capital Budget Items

Projects	2024/25	2025/26	2026/27
Alternative Energy	R20 000 000	R24 500 000	R26 994 517
Landfill Gas To Energy	R16 000 000	R 500 000	R17 000 000
Upgrade transformers at Main substation 7.5MVA to 20MVA	R500 000	R7 571 200	R27 571 200
System Control Centre & Upgrade Telemetry	R3 960 000	R4 356 000	R4 791 600

Source: WC024_2024_1-MTREF-2024-2025_27-March-2024

Notwithstanding the above provisions, it is noted that an IPP tender can be structured such that renewable energy plant connection cost could also be incorporated into the energy tariff, potentially eliminating the need for project related capital expenditure from the Municipality. Also, based on the assumption that the IPP tariffs associated with the proposed Project will be less than the current average Eskom Megaflex rate, no additional operating budget provisions are required, as the expense should be lower than what is currently budgeted for in the annual operating budget.

The need for the proposed Project (from a financial perspective) relates to unsustainable future Eskom tariff adjustments (far above Consumer Price Inflation (“CPI”) based on historic precedent), lost revenue and increased operating cost associated with load shedding events.

- The Municipality has indicated that electricity tariff increases is a key consideration to reduce the economic impact of above inflation Eskom increases and also stated that given the population demographic and associated income levels a large proportion of the Municipality end users are sensitive to electricity prices escalating at levels higher than CPI. This is confirmed by the Medium-Term Revenue and Expenditure Framework Report (2024-2027), which makes provision for 11% electricity tariff increase during the 2024/25 financial year (below the proposed Eskom cost increase of 12.7%). Potential savings associated with an IPP renewable energy project can assist in reducing tariff increases required for annual cost recovery.
- Avoidable direct cost associated with loadshedding consist mainly of energy generation fuel (diesel). Actual expenditure over the last three years in this regard is summarised in **Table 3-10** below.

Table 3-10 Historic diesel consumption cost related to loadshedding

Financial Period	Cost
2021/22	R 1 833 275
2022/23	R 10 725 016
Jul 23 – April 24 (10 months)	R 5 866 447

Substantial loadshedding during the 2023 calendar year clearly reflects in the 2022/23 and 2023/24 (partial) financial year expenditure. Unless the expectation is that future loadshedding will be at 2023 levels (which is unlikely), avoidable direct loadshedding cost can be expected at 2021/22 financial year levels. (Note: Batteries can potentially reduce energy demand from diesel generators during loadshedding; the associated reduction in diesel consumption is one of the considerations for the use of batteries in the future energy mix.)

3.7 SPECIFYING THE OUTPUTS

3.7.1 SUMMARY OF THE MUNICIPALITY'S STRATEGIC OBJECTIVES

To facilitate the Municipality's responsibility to provide electricity to its community in a sustainable manner, the Municipality has identified a need to increase its energy resilience, reflected in a number of key objectives in its IDP:

- Ensure access to affordable, reliable, sustainable, and modern energy for all.
- Take urgent action to combat climate change and its impacts.
- Enabling milestones to be achieved by 2030: Produce sufficient energy to support the industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third.
- Purchasing of electricity from IPPs and the conclusion of an IPP tender as a key priority, with a target of 30% of total energy purchased to be purchased from an IPP by 2027 (Responsible Directorate and Department: The Portfolio Infrastructure Services – Directorate: Infrastructure Services and the Department: Electrical Services, responsible for developing alternative energy supply).

Further to this the Council Meeting held on 30 March 2022 included the following statement: *“Stellenbosch Municipality to commence with the investigation to generate at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers.”*

3.7.2 ACTIVITY THAT THE MUNICIPALITY NEEDS TO UNDERTAKE

The Municipality needs to undertake the necessary technical and feasibility studies to inform the most appropriate technical solution to meet the Municipality's strategic objectives and to evaluate the feasibility of the Project which in turn will provide the Municipality with the information to optimally structure its procurement of new generation capacity and possibly battery energy storage solutions from one or more IPPs.

The Municipality has set a target to procure 30% of its total energy purchased from an IPP through a competitive tender process. As stated, the Municipality has undertaken some technical studies which includes the MEnMP to inform what should be procured by when. The MEnMP, under the least cost (nodal) scenario, stated in the short-term, that the Municipality should procure wind and solar PV and due to relatively small load-centres, and that solar PV is favoured. It also stated that in respect of the loadshedding avoidance scenario, technical solutions to mitigate loadshedding were investigated and BESS was the preferred solution. It also recommended further studies be undertaken to enable an informed decision on the inclusion of BESS. Additionally, the MEnMP recommended that the Municipality engage with the System Operator as to what is permissible during loadshedding.

The MER Initiative Energy Projects Report ("EPR") Appendix 2 recommended that the Municipality consider the procurement of solar PV generation at a capacity peak of 37 MVA at the largest PoS, or it could have various intake points on its three networks, the total of which must not be larger than 51.2 MVA from one (1) or more IPPs.

None of the reports referred to above have recommended a conclusive technical solution to be procured. The Options Analysis detailed in **section 4** of this feasibility study report has considered the viable technical solutions and their financial impacts to present the Municipality with the necessary information to make an informed decision on the optimal solution.

As the preferred technical solution has not been determined yet, at this point the outputs required to deliver the activity, the minimum standards for the outputs and key indicators to measure performance has not been developed in detail, however the typical specifications have been included in **Table 3-11** below.

The procurement documents and PPA will include detailed specifications aligned to the intended risk allocation, however the key assumptions made are:

- the envisaged commercial arrangement will be the Municipality as buyer of electricity generated from an IPP;
- the IPP shall be responsible for the identification of the site and securing tenure to the land on which the Project will be located;
- The base assumption is that the Project will connect to the municipal distribution network, however this assumption will be assessed as part of the Options Analysis; and

- the IPP will take all construction and operational risk in respect of the Project.

The specific outputs to be defined and measured will be defined based on the technical option/s which go to procurement, however key outputs which broadly speaking should apply to any option are described in **Table 3-11** below.

Table 3-11 Output specification

Output Specification	Description
Technology	<p>A recommendation from the Energy Projects Report was for the Stellenbosch Municipality to consider solar PV generation. The MEnMP, under the least cost (nodal) scenario, stated in the short-term, that the Municipality should procure wind and solar PV and due to relatively small load-centres, solar PV is favoured. It also stated that in respect of the loadshedding avoidance scenario, technical solutions to mitigate loadshedding were investigated and BESS was the preferred solution.</p> <p>The Options Analysis will consider solar PV and BESS.</p>
Solar PV plant and BESS Capacity	<p>The Municipality has set a target to procure 30% of its total energy purchased from an IPP through a competitive tender process.</p> <p>A recommendation from the Energy Projects Report was for the Stellenbosch Municipality to consider solar PV plant in the order of 50 MW. This will be further optimised as part of the technical solutions options analysis. The Municipal Council meeting held on 30 Mar 2022 also initiated the investigation to consider “at least sufficient electricity such that loadshedding up to Level 2 will have no impact on the business of Stellenbosch Consumers.”</p> <p>BESS capacity to be determined through technical modelling.</p>
Commercial Operation Date	<p>The Municipality has set a target in its IDP to procure 30% of its total energy purchased by 2027. To achieve this, projects must be able to achieve a COD by 2027.</p>
Point(s) of Connection	<p>IPP connects to the electrical grid network at points that have been deemed feasible and acceptable for interconnection.</p>

Output Specification	Description
Grid Compliance Code	Specify compliance with the South African Renewable Energy Grid Code, which includes minimum technical requirements that need to be adhered to in order to connect to the grid and operate.
Municipality Dispatch Communications/ Commands	Ability to respond to dispatch instructions from the Municipality, e.g. generation curtailment (to avoid backflow of electricity to Eskom network), generation / load set points (to provide required levels of load reduction during load shedding).

3.7.3 MINIMUM STANDARDS FOR THE OUTPUT

The minimum standards for the service to meet the objectives of the Municipality would typically include:

- Adequate electricity generation and capacity volumes: In line with the findings of the feasibility study, industry norms for solar PV and BESS technology, and procurement outcomes / guarantee levels proposed by bidders.
- Compliance with relevant codes: South African, and in some cases international, codes and standards are well-understand for solar PV and BESS and will be defined accordingly at RFP stage e.g. Grid Code, Eskom, NRS, SANS, and IEC.
- Compliance with all regulatory requirements: As applicable for solar PV and BESS projects, which are well defined in South Africa.
- Reliability, availability and efficiency of the generation plant and BESS if applicable: Key metrics will be defined in the RFP, possibly with minimum acceptable levels as per industry and technology benchmarks, and final levels as per proposal / guarantees received from bidders.
- Affordability of the service in line with the Municipality's budget.
- Acceptance by interested and affected parties.
- Achieving the Municipality's economic development goals.

3.7.4 SERVICE INTERFACE EXPECTATION

The key service interfaces expected between the Municipality and IPP/s include:

- a) Metering: Obtaining meter readings for billing purposes, periodic testing and calibration of meters to ensure accuracy (Municipality Electricity Distribution Department)

- b) Grid connection infrastructure: Taking-over of the infrastructure constructed by the IPP and co-ordinating with the IPP regarding operation and maintenance of the grid infrastructure (Municipality Electricity Distribution Department)
- c) Communication and control: Receiving technical parameters from the IPP plant such as generation forecasts, BESS state of charge, etc, and sending of dispatch information / instructions such as generation and/or load set points (Municipal Control Centre)
- d) Performance data: Receiving measurements required to determine actual versus guaranteed performance for calculation of performance penalties (might be multiple technical and contract management departments / functions)
- e) Billing and payments: Validating and making payments to the IPP/s based on invoices and supporting documentation submitted (might be multiple technical and contract management departments / functions)
- f) General contract management: General interface to cover various contractual matters such as claims, disputes, variations, non-performance, notices, termination, etc. (might be multiple technical and contract management departments / functions)

3.8 THE B-BBEE AND SOCIO-ECONOMIC TARGETS

The MER Initiative EPR (Appendix 2: pioneering Project #2 Stellenbosch PV) recommended that the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) PPPFA and its Regulations (2017) be applied to the Project. Specifically, awarding bid evaluation points for the B-BBEE contributor status level of tenderers, and setting bid qualification criteria related to:

- a) designated local content,
- b) the tenderer's B-BBEE contributor status level, and
- c) advancing certain designated groups through a minimum level of subcontracting.

However, the Municipality can no longer implement the previously recommended approach to preferential procurement, as the new PPPFA Regulations (2022) rendered obsolete the preferential procurement qualification criteria proposed in the EPR.

The Municipality has subsequently adjusted its approach to preferential procurement. The 2022 PPPFA Regulations require organs of state to determine their own preferential procurement policies until potential superseding legislation is passed. However, such policies must be in accordance with Section 2 of the PPPFA and the 2022 PPPFA Regulations.

The prevailing PPPFA legislation and regulations allows organs of states to award preference points for price and specific goals. The value of this Project will exceed R50 million, requiring the Municipality to use the 90/10 preference points system – where 10 points can be awarded

for specific goals. Specific goals include contracting with historically disadvantaged persons and implementing programmes of the Reconstruction and Development Programme (“**RDP**”).

The Municipality’s current approach to awarding preference points for specific goals considers B-BBEE level and locality: 50 percent for the B-BBEE contributor status level of the tenderer and 50 percent for the location of the business offices of the tenderer. Under a 90/10 preference points system, 5 points would be awarded to a Level 1 B-BBEE Contributor, and 5 points would be awarded to a tendering business located within the Municipality.

Applying this preference system, in the absence of any other measures, will likely result in sub-par socio-economic development outcomes. This could translate into unmanageable risks to the implementation of the awarded project. Examples of such unmanageable risks include local community unrest, negative public perception and political interference.

This assessment is based on a recognition that large-scale infrastructure projects have characteristics unlike those of conventional municipal procurements. They have a different risk profile, an exacting performance guarantee and project finance regime, and the consequences of failure (e.g., technical, time, cost, etc.) are far-ranging.

South Africa’s Renewable Energy Independent Power Producer Procurement Programme (“**REIPPPP**”) has established a 12-year precedent for promoting broad-based socio-economic benefit through large-scale energy procurement. This has translated into an environment where there is a visible benefit to the people living, and the businesses operating, within the vicinity of the IPP projects.

Given that there are 11 operating REIPPPP projects within the Province, it is reasonable to assume that local communities near the construction and operation of large-scale renewable energy power plants will a) expect a measure of benefit; and b) will be unconcerned about the precise contracting modalities of the project e.g. whether it is a municipal IPP or an IPP procured under the REIPPPP.

This Project needs to be able to incentivise or require bidders to undertake activities that promote broad socio-economic benefit and mitigate community risk, while not unduly affecting the ultimate price of electricity for the Municipality. The Municipality’s Preferential Procurement Policy currently does not have the flexibility to achieve this.

The Municipality would be well served if it introduced strategic flexibility in its Preferential Procurement Policy, to make provision for an expanded preference scoring system for this Project. Aligning preference points with programmes of the RDP will offer maximum flexibility in the process of tailoring the preference points scoring system. Making these changes is possible, while still being compliant with the PPPFA and the PPPFA Regulations (2022). It is not recommended that the Municipality seeks exemption from the provisions of the PPPFA to devise a bespoke system of preference. Such an exemption application to the National

Treasury would introduce an unjustifiable delay to this procurement process and have an estimated low probability of approval.

Strategically adjusting the Municipality's Preferential Procurement Policy is premised on the Municipality's willingness to do so, and that the associated timeframe will not jeopardise this Project's procurement timeline.

In addition to amending the Municipality's Preferential Procurement Policy to create an expanded preference scoring system for the Project's procurement, two other mechanisms are available for promoting broad socio-economic benefit and mitigating community risk in this Project: 1) the use of "objective criteria" related to socio-economic development in the assessment of bid responses; and 2) including contractual obligations related to socio-economic development as a condition of bid award.

Each of the abovementioned three mechanisms for promoting socio-economic development in this Project has pros and cons, from the perspective of the procurement process and the socio-economic development outcomes.

Based on our analysis, the Municipality will need to approve which of the three mechanisms or combination thereof are appropriate and feasible for this Project. Following that decision, it will be necessary for the Municipality to sign off on the details of the socio-economic requirements for this Project.

The design of those requirements is based on several criteria: socio-economic benefit; impact on electricity tariff; choice of energy technology; geographic location of the Project; local community risk management; contract management burden; Project bankability; and be SMART (Specific, Measurable, Achievable, Realistic and Time-bound).

A detailed analysis of B-BBEE and socio-economic considerations has been provided in **section 6** of this feasibility study report. The socio-economic development assessment will aim to:

- Determine the range of legally permissible mechanisms by which socio-economic development considerations can be incorporated into the Project.
- Identify the preferred mechanism for integrating socio-economic development considerations into the Project.
- Determine which socio-economic development measures are suitable for integration in the Project.
- Determine the scope of the preferred socio-economic development measures to which the Project will be contractually bound.

3.9 DETAILED STAKEHOLDER IDENTIFICATION AND MANAGEMENT PLAN

A detailed Stakeholder Management Plan is included as part of this report under **Annexure A**. The below sections cover key aspects regarding the identification of key stakeholders and outlines a stakeholder management plan for key stakeholder groups.

3.9.1 STAKEHOLDER MANAGEMENT PROCESS DEFINED

The management of stakeholders entails the following process:

- Identifying the people, groups, or organizations that could impact, or be impacted upon by the Project;
- The appraisal of identified stakeholders' expectations and their impact on the Project; and
- The development of appropriate management strategies to effectively engage stakeholders in Project development, decisions and execution.

To effectively manage stakeholders and their expectations, the Municipality must manage relationships with all stakeholders identified by building trust, gathering information, provide information regarding the Project, early identification of challenges, resolving possible conflict, actively listening, and overcoming any resistance to change for the Project.

The engagement with stakeholders should take place throughout the Project lifecycle and be based on the analysis of their needs, interests and potential impact on the Project's success.

In the section below we have highlighted the key stakeholders, however a detailed stakeholder management plan is attached as **Annexure A**.

3.9.2 IDENTIFICATION OF KEY STAKEHOLDERS

In this section we have identified key stakeholders listed in **Table 3-12** which may have an impact on the Project (with more detailed provided in **Annexure A**).

Table 3-12 Key Stakeholders

Stakeholder	Nature of relationship to the Project and the impact the stakeholder may have and engagement approach
Stellenbosch Municipality	<p>The Municipal Structures Act, section 84, provides for division of powers and functions between local and district municipalities. A municipality's power and authority to conclude contracts for the purchase of electricity, for the purposes of fulfilling a constitutional mandate to deliver electricity to consumers within its area of jurisdiction, can also be founded on common law.</p> <p>The below listed are the internal stakeholder groups from the Municipality:</p> <ul style="list-style-type: none"> • Municipality Political Structures

Stakeholder	Nature of relationship to the Project and the impact the stakeholder may have and engagement approach
	<ul style="list-style-type: none"> ▪ Council of Stellenbosch Municipality ▪ Executive Mayor's Office • Municipality Administration <ul style="list-style-type: none"> ▪ Municipal Manager's Office ▪ Management Team⁷ ▪ Directors <p>The Municipality will be the procurer and off-taker in respect of the Project and is therefore a critical stakeholder. Regular consultations with the Municipality are key to the success of the Project.</p> <p>The Municipality forms part of the Project Steering Committee which is chaired by the Municipal Manager.</p>
WCG Department of Infrastructure	The Department is jointly developing the Project with the Municipality and is the Project sponsor. The Department will be consulted throughout the planning and implementation of the Project. The Department will form part of the Project Steering Committee.
Cape Winelands District Municipality	The district is divided into five subdistricts, each with their own local municipality. These are Stellenbosch, Drakenstein, Witzenberg, Breede Valley and the Langeberg Municipalities. It is possible that consultation with the district municipality may be required if this Project has wider impacts on the district, and especially on Drakenstein Municipality given that this area is well suited for wind generation (current and future).
WCG Department of the Premier - Communications	The WCG will be updated on key milestones and consultations will be considered when appropriate. The Premier's Energy Digicon's may be an ideal platform to raise awareness for the Project.
WCG Department of Environmental Affairs and Development Planning ("DEADP")	The DEADP mission is to promote a resilient, sustainable, quality and inclusive living environment in support of human well-being. They will be informed and consulted as necessary at key points in the Project.
National Department of Mineral Resources and	DMRE is a key stakeholder given its role in electricity planning at a national level, and could be consulted to solicit their views during the various phases of the Project. The DMRE will be formally consulted as part of the process of securing MFMA section 33 approval as required.

⁷ To note that the Directors are the core of the Management Team, and the Chief Financial Officer (CFO) is one of the Directors.

Stakeholder	Nature of relationship to the Project and the impact the stakeholder may have and engagement approach
Energy ("DMRE")	
Department of Co-Operative Governance and Traditional Affairs ("COGTA")	<p>COGTA is a key stakeholder and will be consulted to solicit their views as part of the process of securing MFMA section 33 approval as required.</p> <p>South African Local Government Association ("SALGA"), which reports to the Minister of COGTA, and is mandated to transform the local government sector to one with the required capacity to contribute meaningfully to poverty alleviation, economic development and all socioeconomic opportunities that the state provides for its people may be consulted in respect of economic development policies that may affect the Municipality.</p>
National Treasury	<p>National Treasury is a key stakeholder and will be consulted to solicit their views as part of the MFMA section 33 approval process as required.</p> <p>It would be advisable to provide regular updates to National Treasury in respect of the progress made in the implementation of the Project.</p> <p>Consultation with National Treasury may also be required, in relation to new national regulations on preferential procurement (in terms of the Public Procurement Bill 2023, if that is passed and comes into effect during the procurement phase).</p>
WCG Provincial Treasury	<p>Provincial Treasury will be consulted where required for purposes of MFMA section 33 approval, and as appropriate in respect of the implementation of the Project.</p> <p>In respect of economic development, consultation on SCM and Preferential Procurement policies that affect the Municipality.</p>
WCG Department of Economic Development and Tourism ("DEDAT")	<p>The MER Initiative forms part of the Economic Planning that provides support to DEDAT leadership with the development, improvement and application of policies and strategies by defining a clear vision as well as strategic outcomes. The MER Initiative team has been seconded to the Department of Infrastructure and the Department of the Premier (Core Energy Team).</p> <p>If relevant, consultation on approach to driving/ incentivising socio-economic development outcomes and bid assessment criteria.</p>
WCG Department of Local Government ("DLG")	<p>The DLG supports and strengthens the capacity of municipalities to manage their own affairs and is responsible for promoting good governance in local authorities to enhance municipal service delivery.</p> <p>The DLG will be consulted and updated throughout the Project phases as appropriate.</p>
National Department of Public Works and Infrastructure ("DPWI")	<p>The DPWI is committed to the attainment of a transformed built environment sector by providing strategic direction on the integration of public works priorities; and contributing to the national goals of job creation and poverty alleviation through Public Works Programmes. The DPWI is also a critical role-player in relation to projects listed as SIPPs under the Infrastructure Development Act, 2014. The DPWI will be notified on progress made in respect of the Project.</p>

Stakeholder	Nature of relationship to the Project and the impact the stakeholder may have and engagement approach
The National Energy Regulator of South Africa ("NERSA")	NERSA's mandate is to regulate the electricity industry in terms of the ERA. NERSA will require a COS Study for any change to the tariff structure that arises from procurement of renewable energy and or BESS. NERSA would also be responsible for licensing IPPs, to the extent that those IPPs which are successful in relation to the Project are required in terms of the ERA to obtain generation licences. Based on current exemptions under Schedule 2 of the ERA, licensing is unlikely to be required.
Eskom	<p>The Municipality is still dependent on obtaining the bulk supply of their electricity from Eskom.</p> <p>Important interfaces with Eskom will include alignment and confirmation on how the solar PV and BESS systems may contribute to load reduction during load shedding, within the context of NRS048-9; possible wheeling, net-metering and/or banking arrangements; and the connection of new generation capacity in the context of grid capacity constraints in the Western Cape / Greater Cape supply areas.</p> <p>Discussions may be required with Eskom Distribution, Eskom Transmission / Planning, Grid Access Unit, Load Shedding Committee, Key Customer Executive, etc.</p>
National Transmission Company South Africa SOC Ltd	<p>The transfer of Eskom's transmission division to the National Transmission Company of South Africa SOC Ltd (NTCSA) is imminent, and NTCSA has been licensed by NERSA to operate the transmission system.</p> <p>The Project may require the transmission of electricity from one intake point to another making use of the NTCSA's infrastructure, if the IPP generation facilities are located outside the Stellenbosch municipal area or the electricity is wheeled through the transmission network.</p>
Department of Forestry, Fisheries and the Environment ("DFFE")	<p>Consult on climate change objectives, licensing requirements and related timelines and developments in respect of carbon tax.</p> <p>The DFFE is responsible for issuing Environmental Authorizations (EAs) under the NEMA.</p>
The South African Photovoltaic Industry Association ("SAPVIA")	<p>Consultation to obtain a better understanding of projects that may be under development in the municipal area.</p> <p>Consultation to receive experience and insight on the most cost efficient and impactful approaches to driving socio-economic development outcomes.</p>
Development Finance Institutions ("DFIs")	Consultation to obtain their view of potential credit enhancement instruments that could be deployed.
Financial Investment and Insurance Institutions	Consultation on the financial structure of the procurement programme which includes amongst others performance guarantee requirements, bid bond and its impact on project bankability.

Stakeholder	Nature of relationship to the Project and the impact the stakeholder may have and engagement approach
IPP project owners/ developers	It will be valuable to engage with project developers to firstly gather information and create awareness of the planned procurement process.
WCG – Minister of Infrastructure	The Minister of Infrastructure will also be engaged where appropriate.
Climate Finance Funding	There are specific managed funds that have a “climate change” mandate. This being a project that may have an impact on lower/ low carbon emissions.
South African Local Government Association “(SALGA)”	South African Local Government Association (SALGA) is an autonomous association of all 257 South African local governments, comprising of a national association, with one national office and nine provincial offices. Membership of the association is voluntary. SALGA accounts to its members in terms of the SALGA Constitution (as amended in 2016) and its Governance Framework regulating its structures and mandating processes.
Cape Chamber of Commerce – Winelands Chapter	Has a broad business membership whose members may have a keen interest in the project’s development and to participate in some aspects of the Project value chain.
Agri Western Cape	Agri Western Cape is a voluntary membership organisation that represents commercial farmers in the Western Cape. Their members may have access to land on which PV plant may be established.
Devon Valley Farmers Association	The Devon Valley Farmers Association market their offerings under the D’Vine Valley brand name. Their members may have access to land on which PV plant may be established.
Women on Farms Project (“WFP”)	Women on Farms Project (WFP) is a South African feminist organisation operating in the Northern and Western Cape that works with women who live and work on commercial farms. WFP seeks to empower farm women primarily through rights-based capacity building as well as support for their organisation in community-based structures. WFP enables farm women to know and claim their rights. Recent campaigns among others have targeted feminist-centred land redistribution. Their members may have access to land on which PV plant may be established. May also fulfil a role in the economic development aspects of the Project

3.9.3 STAKEHOLDER ENGAGEMENT PLAN

It is possible that communication with regards to the Project may not reach each key stakeholder and or interest group in and around the community area including organizations and communities that are either interested or affected by this Project.

Thus, a communication plan has been compiled below to guide and illustrate the engagement with representative **groups** of stakeholders to show a structured approach with regard to communication in relation to the Project. It should be noted that all **individual** stakeholders identified are outlined and mapped out in detail under **section 3.2.3** of **Annexure A** (Stakeholder Management Plan) including the approach in engagement for each stakeholder.

Table 3-13 Key stakeholders

No.	Stakeholder Group	Focus	Message/ Purpose	Frequency	Timeframe/ Date	Responsibility	Mechanism/ Documentation
1.	Provincial Ministry of Public Works and Infrastructure (formerly the Ministry of Public Works)	Sharing of information around the Project and the positive impact of the Project	To inform them about the Project. To engage with them on energy regulation / reduction, etc. issues (energy reduction, load shedding impact, availability of new energy technologies) of the area. Impact of Project on Stellenbosch operations	As and when the need arises	At regular meetings or forums at quarterly intervals Steercom Meetings	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Brochures in local languages Forum meetings Stellenbosch and sector meetings
2.	Stellenbosch Council	To provide views and recommendations To grant approval by means of Council Resolutions	Update on Project performance. Decisions to be made/ approved	As and when the need arises	Council meetings As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Board meeting pack Progress Reports

3.	Government Institutions – National & Provincial Departments	To provide views and recommendations	<p>To inform them about the Project.</p> <p>To source information related to national planning related to population, health, social (consider impact on wine farms, street cafes/ restaurants, tourism for interest in historical buildings), academic (impact on famous Stellenbosch University), socio-economic activities and development in the Stellenbosch area</p> <p>To engage in order to receive comments and inputs on technical milestones developed in the classification process</p>	As and when the need arises	Steercom Meetings Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	<p>Meetings Forums Draft reports Media release during the specified timeframe in terms of the no. of days of submitting Progress report</p>
t4.	Government Institutions / Funding Institutions): WCG	Project funders and partners	To inform them about progress and issues on the Project	Monthly PSC Meetings	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	PSC Meetings Stakeholder engagement meetings
5.	(Local Government): Stellenbosch Local Municipality	<p>Engagement from a planning perspective</p> <p>Engagement from a lessons-learned perspective</p>	To introduce the Project and gather information related to the Project / energy IPPs	As and when the need arises	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	<p>Meetings (one on one meetings, group sessions, PSC meetings) Newsletters</p>

	City of Cape Town	Engagement during feasibility to reach the Project goals and objectives To ensure a bankable Project	To engage them on the proposed options developed in this Project				Draft reports Progress reports Forums
6.	Private Sector: Advisors/ Industries): Transaction Advisor NERSA	To solicit comments and input on industry norms and standards	To source information related to data & methodology in relation to industry activities To engage in order to receive comments and inputs on technical aspects and impacts of the Project	Regularly; as and when the need arises	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Monthly Communique Media release during the 60 days of public participation
7.	Public: Interested And Affected Parties (I & AP) / Other Interest Groups The Media	Sharing of information around the Project and the positive impact of the Project	To inform them about the Project. To engage with them on energy regulation / reduction, etc. issues (energy reduction, load shedding impact, availability of new energy technologies) of the area. Impact of Project on Stellenbosch operations	As and when the need arises	During specified timeframe of public participation process At regular meetings or forums at quarterly intervals Steercom Meetings	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Brochures in local languages Forum meetings Stellenbosch and sector meetings

4. OPTIONS ANALYSIS

4.1 INTRODUCTION

The focus of the Options Analysis is to identify and assess the viable technical solutions that aligns to the Municipality's strategic objectives and to assess their financial impacts and any regulatory/legal, socio economic and economic development aspects that may differ in respect of the options.

The Options Analysis was undertaken in the following steps:

Step 1: Assessing the Municipality's electricity supply network and load

Step 2: Identification of plausible options for the supply of solar PV electricity and/or BESS

Step 3: Technical assessment of the options that considered:

- modelling of solar PV only options to determine system size based on load for a fixed level of plant curtailment,
- modelling of solar PV + BESS options to determine system size based on load, for a fixed level of plant curtailment, with BESS sizing appropriate for load shedding reduction or load curtailment
- development of energy generation profile, BESS charge and discharge profile, and calculation of the reduction (if any) of unserved energy; and
- network capacity and strength (power system) studies.

Step 4: Financial assessment of the options that considered:

- supply analysis;
- determine the cost of supply or tariff of the options considered;
- determine the impact on the cost of supply of the Municipality;
- determine the NPV impact of the options; and
- the impact on the Municipal Balance Sheet.
- The financial analysis also considered the potential impact of the proposed MunicFlex tariff restructure expected to be implemented.

Step 5: Consideration of any legal/ regulatory and economic development factors that may differ or have influence on the options.

Step 6: Comparative assessment of the results considering a multi-criteria approach to present the Municipality with the necessary information to make an informed decision on the optimal solution.

4.2 BACKGROUND TO THE MUNICIPALITY'S ELECTRICITY SUPPLY NETWORK AND LOAD

4.2.1 GENERAL

The Municipality's electrical distribution network covers a significant portion of the Stellenbosch area, Cloetesville area, Franschhoek area, and parts of Pniel area (sometimes referred to in the document as Drakenstein).

Table 4-1 provides a summary of intake points along with their corresponding Maximum Demand ("MD"), Notified Maximum Demand ("NMD"), and voltage levels. Currently, the Municipal supply area has a total MD of 80.7 MVA and a total NMD of 95 MVA, as reported in the 2023 Electricity Master Plan. Besides Pniel, all electricity is supplied directly from Eskom. For Pniel, the Municipality purchases electricity from the neighbouring Drakenstein Municipality and sells to its customers in Pniel and the surrounding areas. This is done via three supply lines. There are plans to connect the three Pniel networks directly to a single Eskom supply point via an approved substation project slated for commissioning in 2026.

Table 4-1 Overview of the Municipality's Electricity Supply Points

Town	Intake Point	MD (MVA)	NMD (MVA)	Supply Voltage (kV)
Stellenbosch	Main substation	51.2	60	66
	Cloetesville substation	12.3	16	66
Franschhoek	Franschhoek substation	9.5	10	66
Pniel	Drakenstein prison	0.6	1	11*
	FRG Intake	3.3	4	11*
	Riversmeet Intake	3.8	4	11*
Total		80.7	95	

Notes: *Supply voltage at Pniel expected to change to 66 kV once new Eskom Pniel substation is commissioned in 2026

Figure 4-1 below geographically shows the distribution networks in the Stellenbosch (includes Cloetesville), Franschhoek, and Pniel areas.

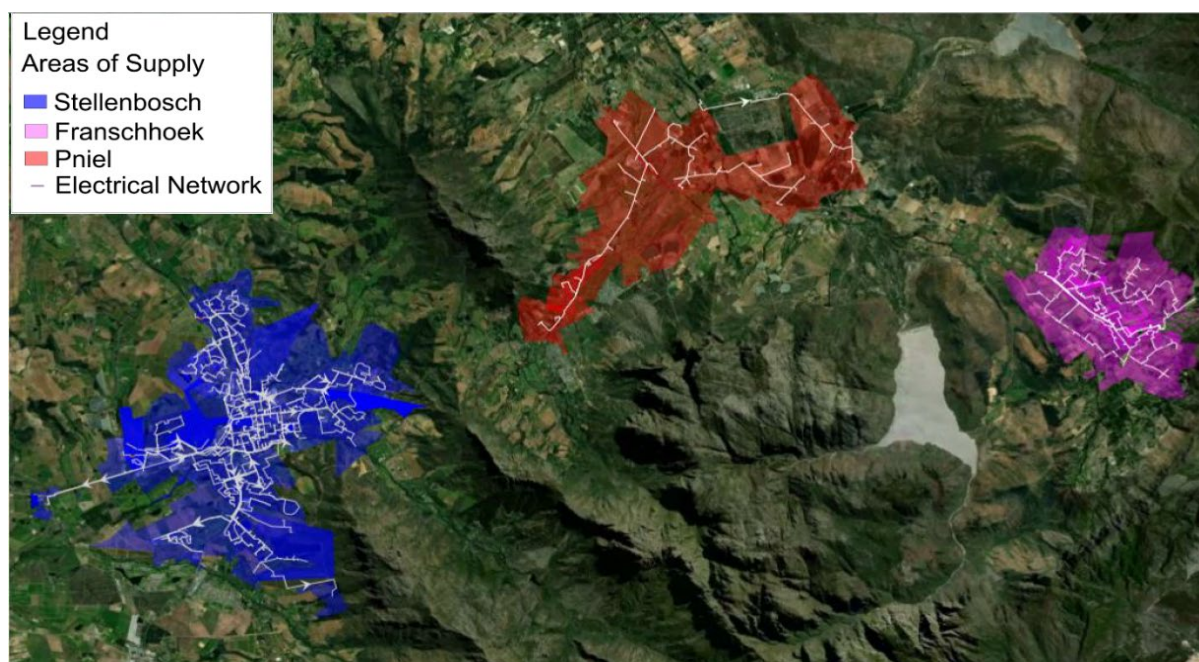


Figure 4-1 Geographical View of the Municipality's Electricity Distribution Networks (Source: 2023 Electricity Master Plan)⁸

Load data was received for the years 2021, 2022 and 2023. The data provided was in half hourly increments and measured at the respective metering points. The metering data for the three Pniel intakes was combined and is presented as an aggregated load in **Table 4-2** below. In general, there is a downward trend in the volume of electricity metered at the Municipality's supply points over these three years. The downward trend is almost certainly as a result of the increasing level of load shedding and/or embedded generation (such as commercial and residential solar PV, installed as a means to combat load shedding) in these three years.

Table 4-2 Total Demand (GWh) History (Loadshedding included)

Year	Stellenbosch	Franschhoek	Cloetesville	Pniel	TOTAL
2021	243.4	44.7	56.0	9.8	353.9
2022	239.4 (↓)	45.2 (↑)	58.2 (↑)	9.2 (↓)	352.0 (↓)
2023	215.1 (↓)	42.2 (↓)	53.0 (↓)	7.5 (↓)	317.8 (↓)

Figure 4-2 below shows the historical load shedding data categorised into stages from Stage 1 to Stage 8 for the years 2021 to 2023. The data is sourced from the EskomSePush

⁸ Note that the areas as depicted in this figure are generalised and do not align with the NERSA distribution license areas of supply.

loadshedding history website and indicates the significant increase in load shedding hours from 2021 to 2023.

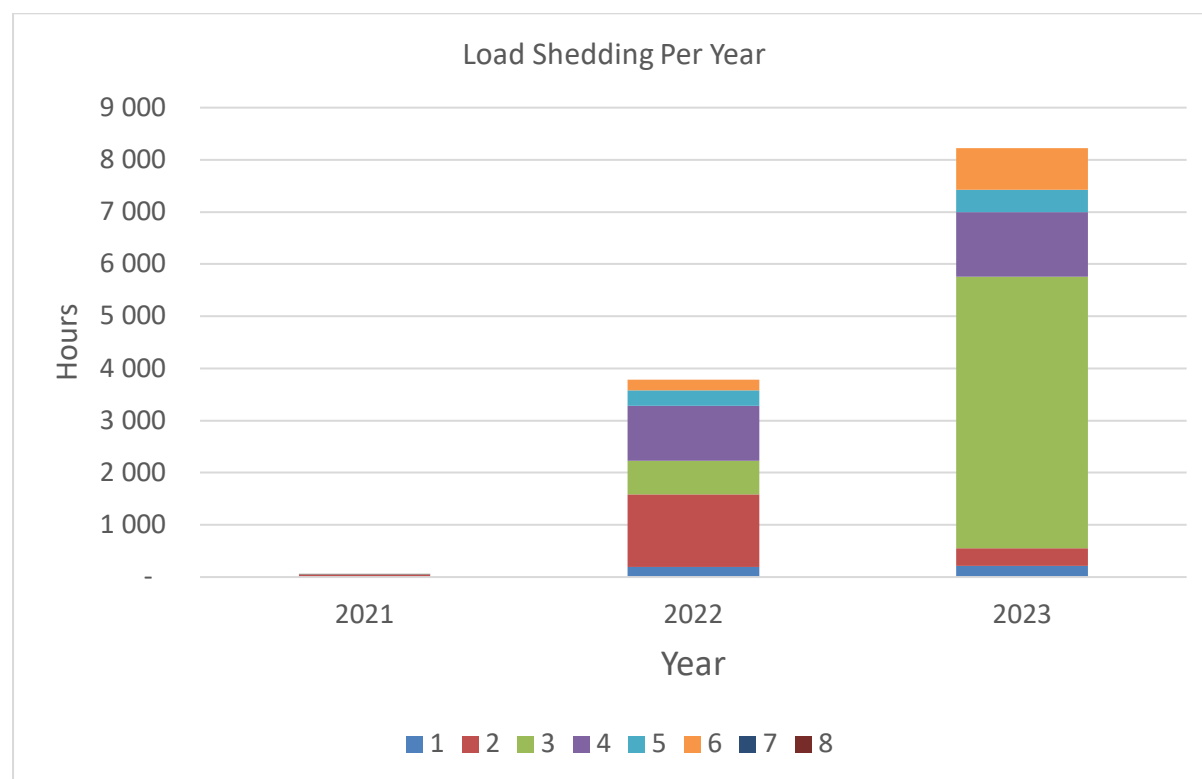


Figure 4-2 Historical Loadshedding Data Per Year

In 2021, a total of 53 hours of load shedding were recorded, with Stage 2 contributing the most hours. In 2022, the total hours of load shedding increased significantly to 3,781 hours, with Stage 2 again contributing the most hours. In 2023, there was a further increase in total load shedding hours to 8,222 hours, with Stage 3 contributing the most hours.

4.2.2 NETWORK CONFIGURATION

4.2.2.1 Overview

As presented in **Section 4.2**, the Municipality's electrical distribution network covers a significant portion of the Stellenbosch area, Cloeteville area, Franschhoek area, and parts of Pniel area (sometimes referred to in the document as Drakenstein). This section of the feasibility study report will outline the high-level network configuration of the four areas.

4.2.2.2 Stellenbosch and Cloeteville

The Stellenbosch electricity distribution network is structured around six main 66/11kV primary substations namely Main (also known as Industries) substation, University substation, Markotter substation, Jan Marais substation, Golf Club substation and Cloeteville substation. Of these, only Main and Cloeteville substations are supplied directly by Eskom, while the

other four substations are interconnected and transmit 66 kV to their respective supply zones. **Figure 4-3** indicates the high-level Stellenbosch distribution network.

Stellenbosch Main substation, provides electricity to almost the entire Stellenbosch town area, including suburbs like Devon Valley, Devon Park, Onder Papegaaiberg, Technopark, Die Boord, and the Stellenbosch Central Business District ("**CBD**"). It is adjacent to a 132/66/11kV substation owned by Eskom. The Eskom substation consists of 2 x 80MVA and 1 x 45 MVA 132/66kV power transformers. The Main substation acts as a switching point for the interlinked 66kV transmission network within Stellenbosch town and distributes 11kV to its supply zone through substation transformers.

The other substations in Stellenbosch, namely Markotter, Golf, University, and Jan Marais, each play a crucial role in supplying electricity to various parts of the Stellenbosch area, catering to a mix of residential, commercial, and industrial customers.

The Cloetesville substation is responsible for supplying electricity to the Cloetesville, Welgevonden Estate, Kayamandi, and La Colline areas within Stellenbosch town. The main types of loads in this area include residential, churches, educational, and commercial customers. Cloetesville substation is equipped with 2 x 20MVA 66/11kV power transformers. The Cloetesville network is connected to the Stellenbosch network via 3 x 11kV lines, which connect University substation (at Stellenbosch) with Tennant substation (at Cloetesville). We understand from the Municipality's technical team that there is little to no flow of electricity through these lines. We understand that since Stellenbosch and Cloetesville are already connected at 66kV, utilising the 11kV lines would result in a parallel connection and a resultant circulating current. Therefore, for the purposes of Energy Generation and Storage Dispatch Modelling, it was assumed that Stellenbosch and Cloetesville are essentially two separate, independent networks with their own supply from Eskom (i.e. no interconnection or power flow between the two networks).

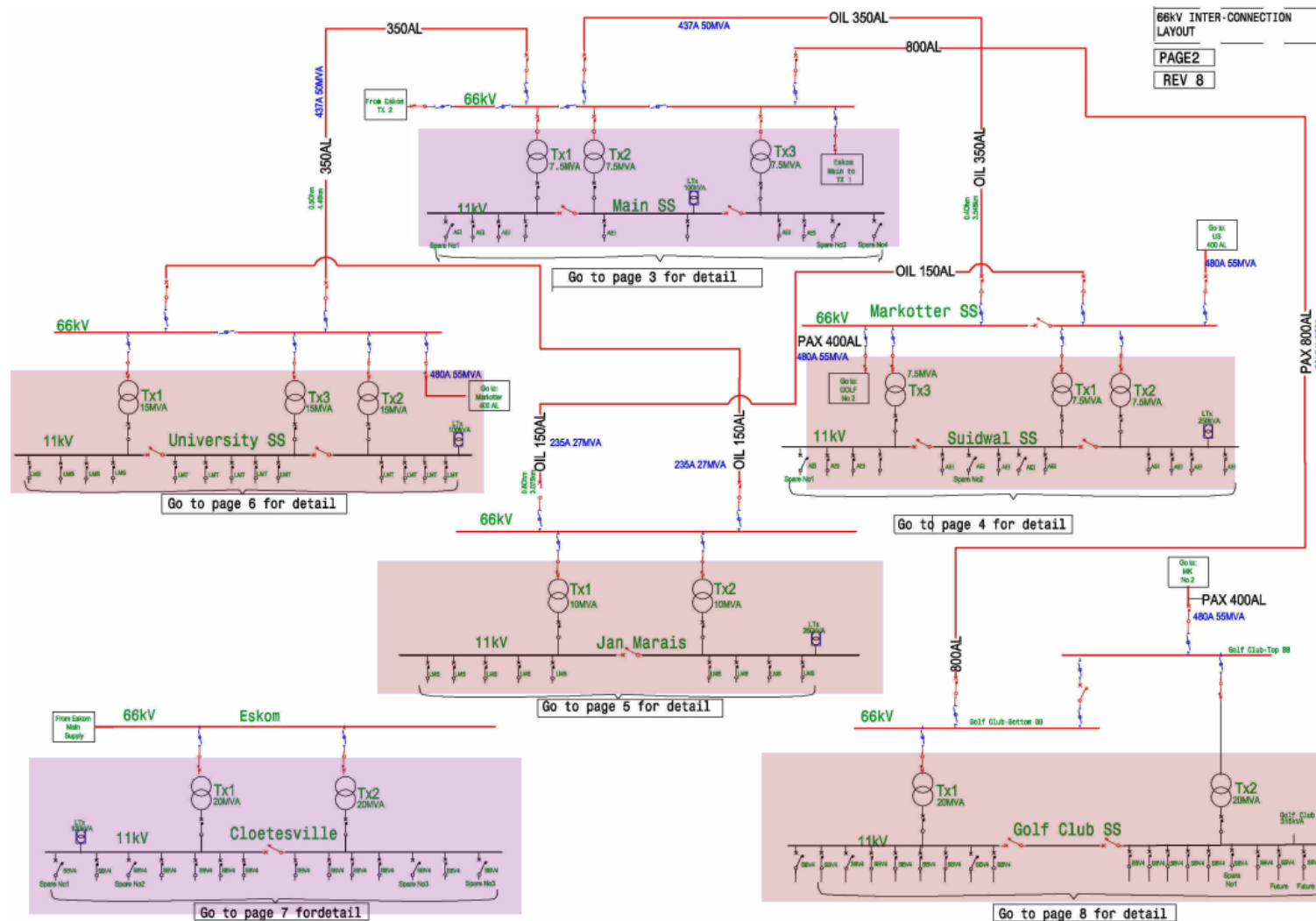


Figure 4-3 Stellenbosch Electrical Distribution Network

4.2.2.3 *Franschhoek*

Franschhoek receives its electricity supply from Eskom through one intake substation, Franschhoek substation. The substation has 2x 20MVA 66/11kV power transformers supplied from Eskom. The supply zone provides electricity to the entire Franschhoek town, including residential, farms, and holiday accommodations. The area is known for its affluent population and has seen an increased installation of solar rooftop PV systems. The distribution network in Franschhoek includes 11kV distribution at three switching stations namely Groendal, Hugenote, and Monument substations. **Figure 4-4** indicates the high level Franschhoek distribution network.

FRANSCHHOEK
SUBSTATION

PAGE 2

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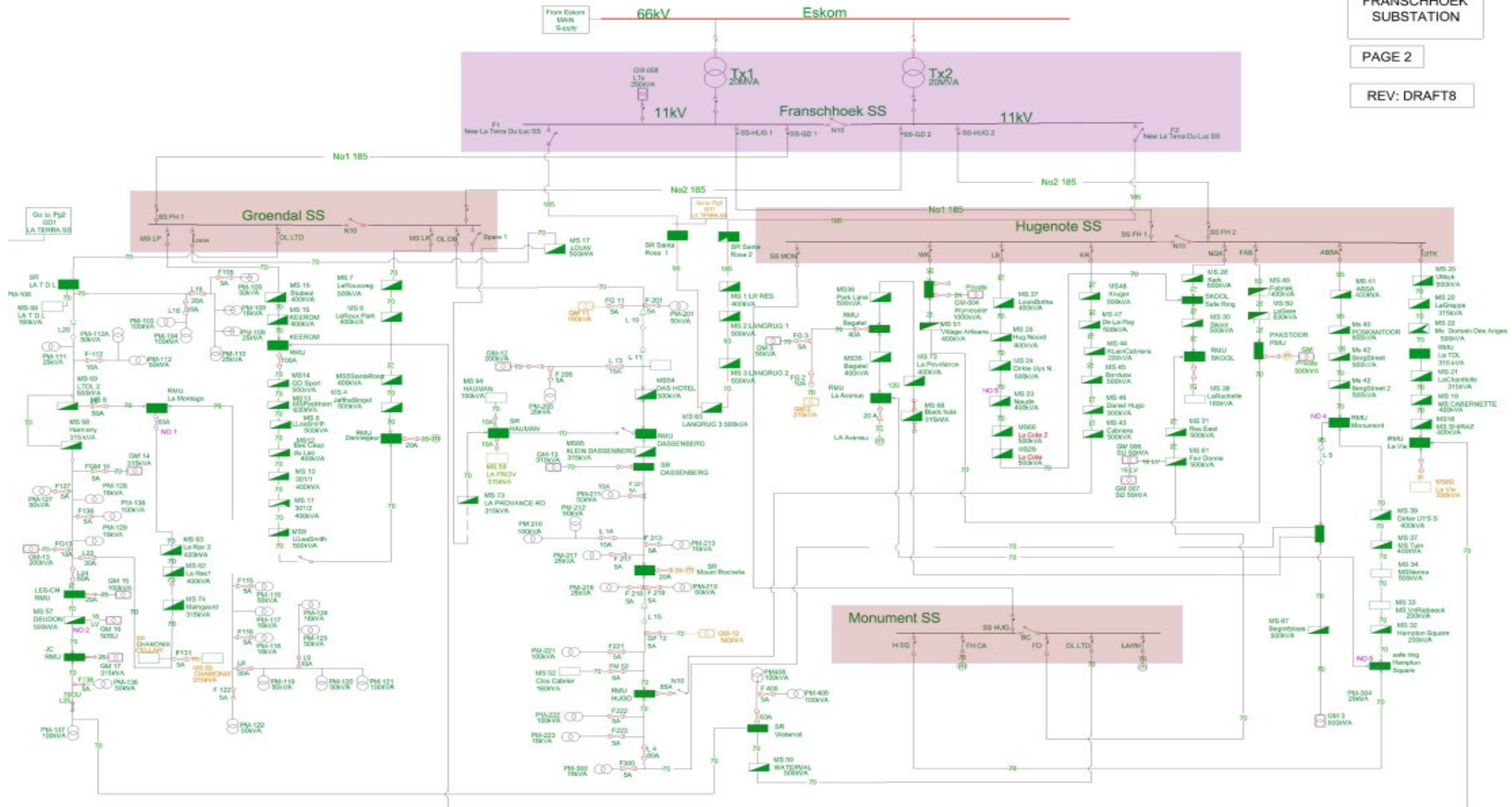


Figure 4-4 Franschhoek Electrical Distribution Network

4.2.2.4 Pniel and proposed Eskom Connection

Pniel receives its electricity supply from three intake points through Ring Main Units from Drakenstein Local Municipality, with plans in place to construct a new Eskom Pniel substation fed from new Eskom connection in Dwarsrivier as indicated in **Figure 4-5**. The area comprises the Hollandse Mollen, Riversmeet, and the RFG (Rhodes Food Group) intake points, as shown topographically in **Figure 4-6** below. These intake substations were previously owned by Drakenstein Local Municipality before the Municipality became responsible for the supply zones. Note: A future Eskom substation (the Bienne Donne Substation) has been planned and approved for construction in Pniel, where Eskom will directly supply the Municipality.

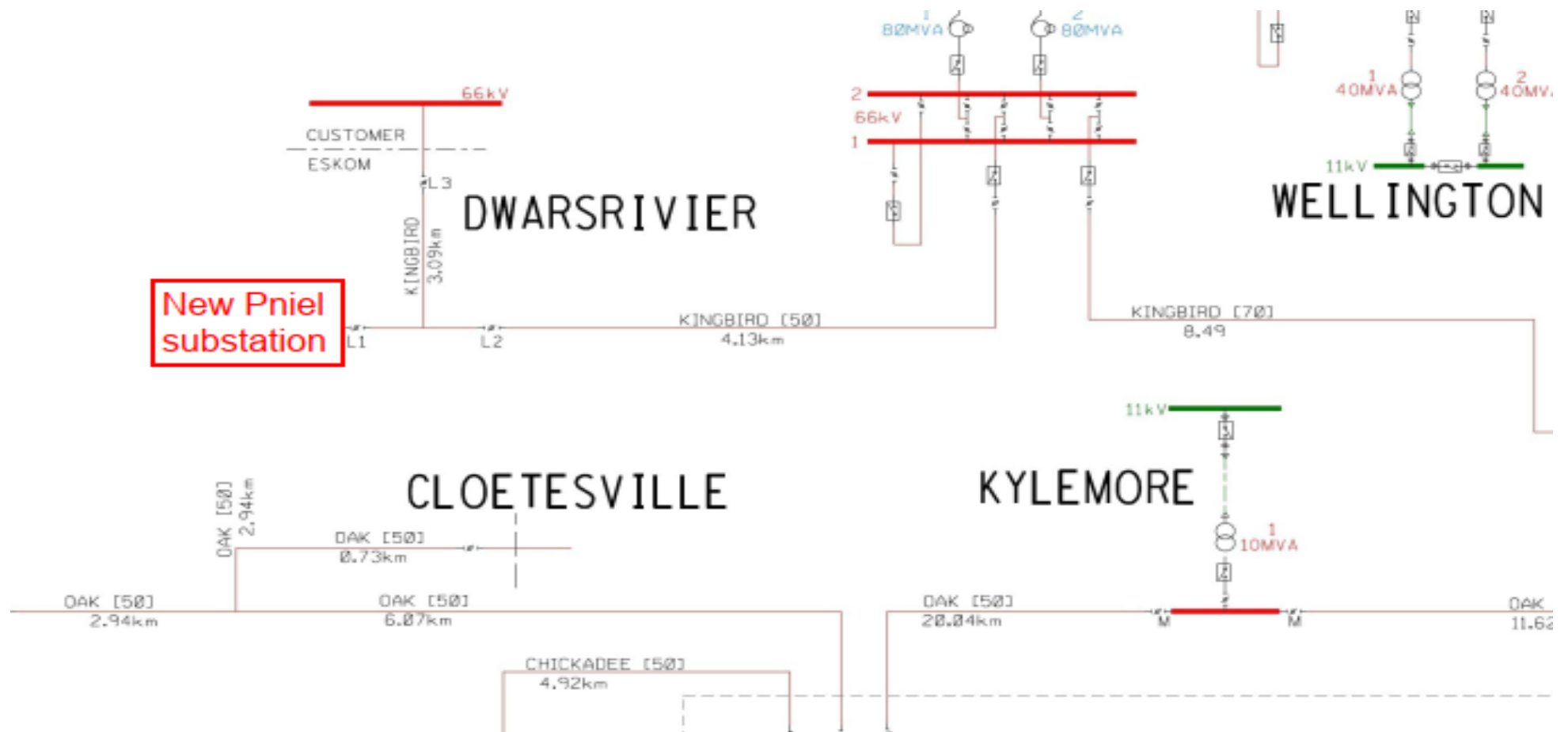


Figure 4-5 Planned New Pniel Substation Connection Point

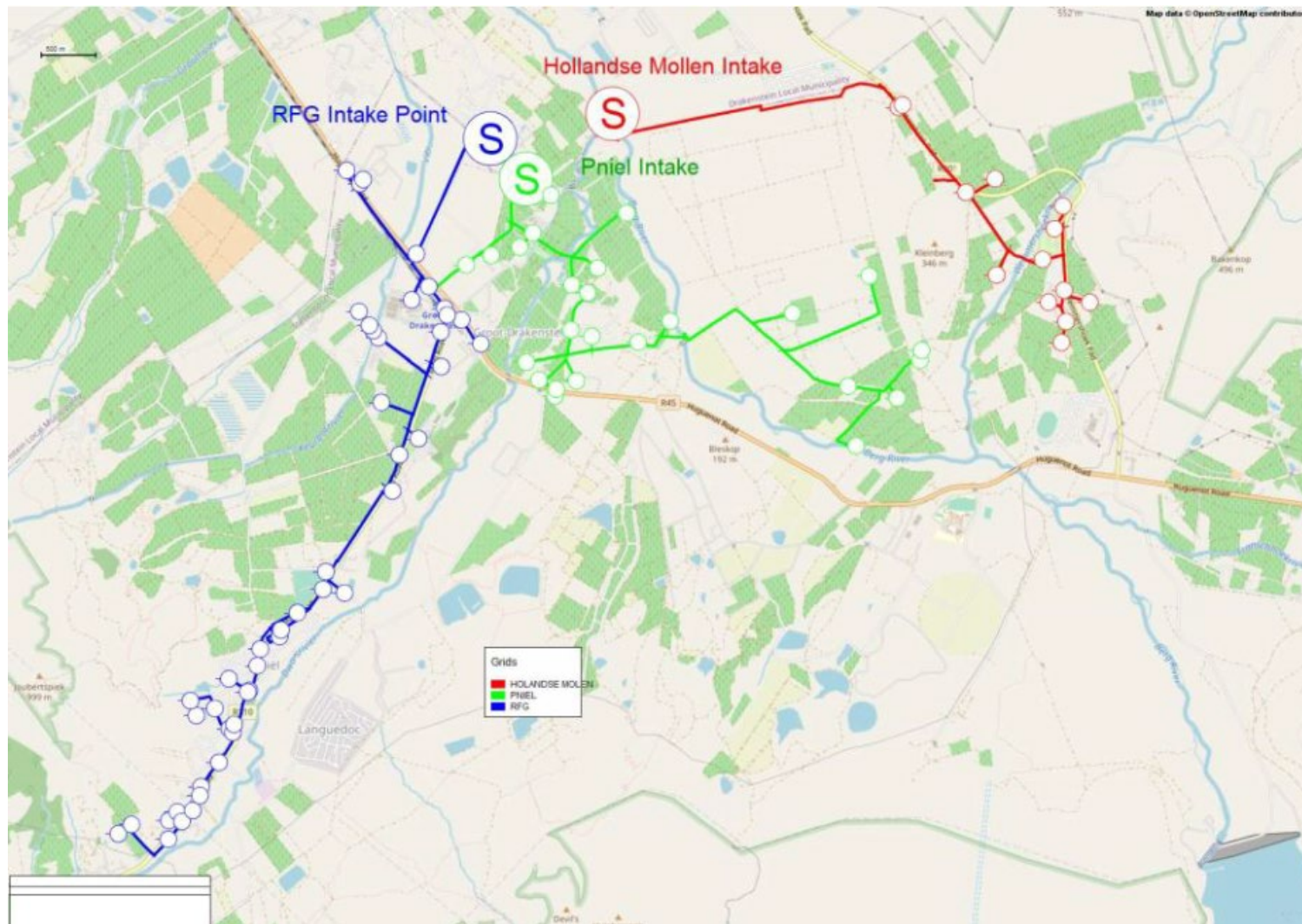


Figure 4-6 Pniel Topographical Distribution Network (Source: 2023 Electricity Master Plan)

4.2.3 HISTORICAL LOAD PROFILES

Historical load profiles analysis for Stellenbosch, Cloetesville, Franschhoek and Pniel have been carried out to provide insights into the electricity consumption patterns in different seasons and on weekdays versus weekends, and for developing a representative load profile with load shedding removed. The data is presented in four categories namely summer-weekday, summer-weekend, winter-weekday, and winter-weekend. And the findings are as follows for the year 2022.

4.2.3.1 Stellenbosch

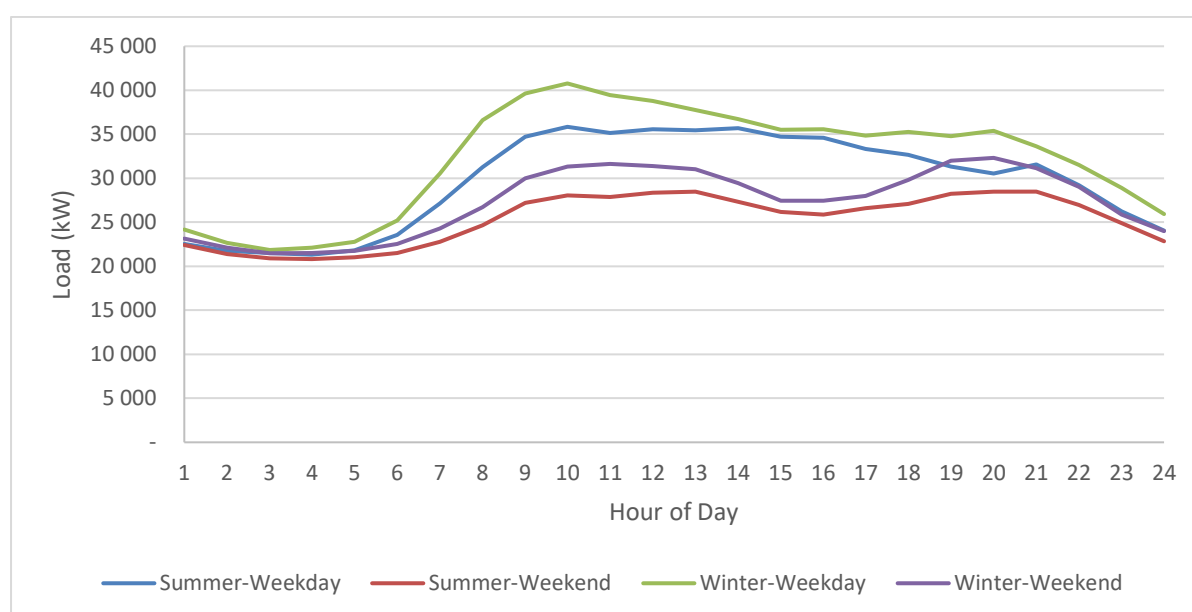


Figure 4-7 Stellenbosch 2022 Average Day Load Profiles (load shedding excluded)

The 2022 historical load profile analysis for the Stellenbosch area in **Figure 4-7** above indicates trends in electricity consumption over the 2022-year. The data shows that peak demand typically occurs during business hours and in the early evening, indicating a mix of residential and commercial activities. The load profile also reflects seasonal variations, with higher demand in winter months likely due to heating requirements.

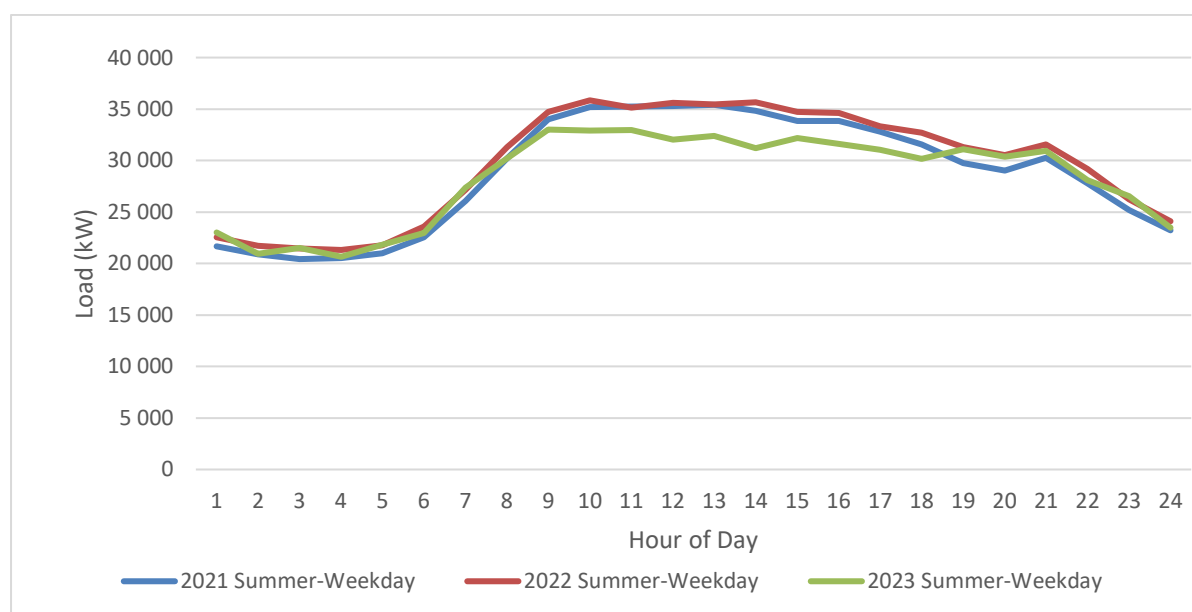


Figure 4-8 Stellenbosch 2021, 2022, 2023 Summer Weekday Profiles Comparison (load shedding excluded)

Figure 4-8 above indicates the load for the average summer weekday profile of Stellenbosch for the years 2021, 2022, and 2023, with load shedding removed (load during load shedding hours was replaced with the average load for the same hour as recorded on days when there was no load shedding). There is a clear downward trend seen during daytime hours in 2023, compared to 2021 and 2022. The lower day time load in 2023 is likely because of embedded solar PV installations commissioned in late 2022 and 2023.

4.2.3.2 Cloetesville

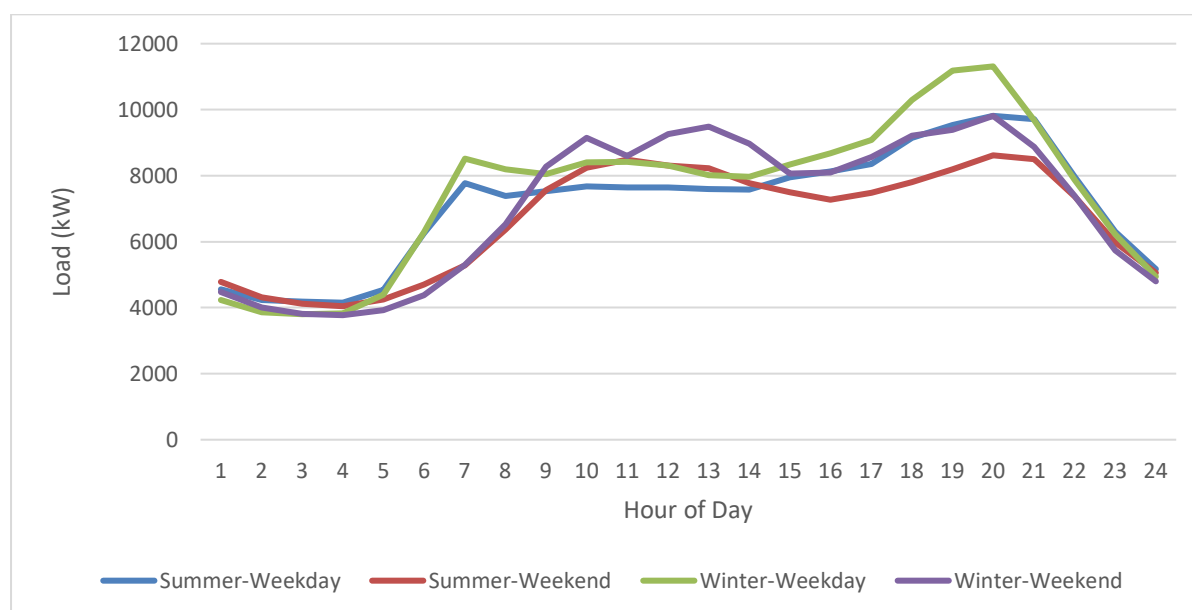


Figure 4-9 Cloetesville 2022 Average Day Load Profiles (load shedding excluded)

The 2022 historical load profile analysis for the Cloetesville area indicates trends in electricity consumption over the 2022-year. Similar to Stellenbosch, Cloetesville also shows seasonal variations in electricity consumption.

During the summer months, the electricity consumption tends to be lower compared to the winter months. There is also a difference in electricity consumption between weekdays and weekends. Weekday consumption tends to be higher than weekend consumption during the early hours of the day and late evening and dips below weekend consumption during business hours. Peak electricity consumption tends to occur during the late afternoon and early evening hours, particularly during weekdays.

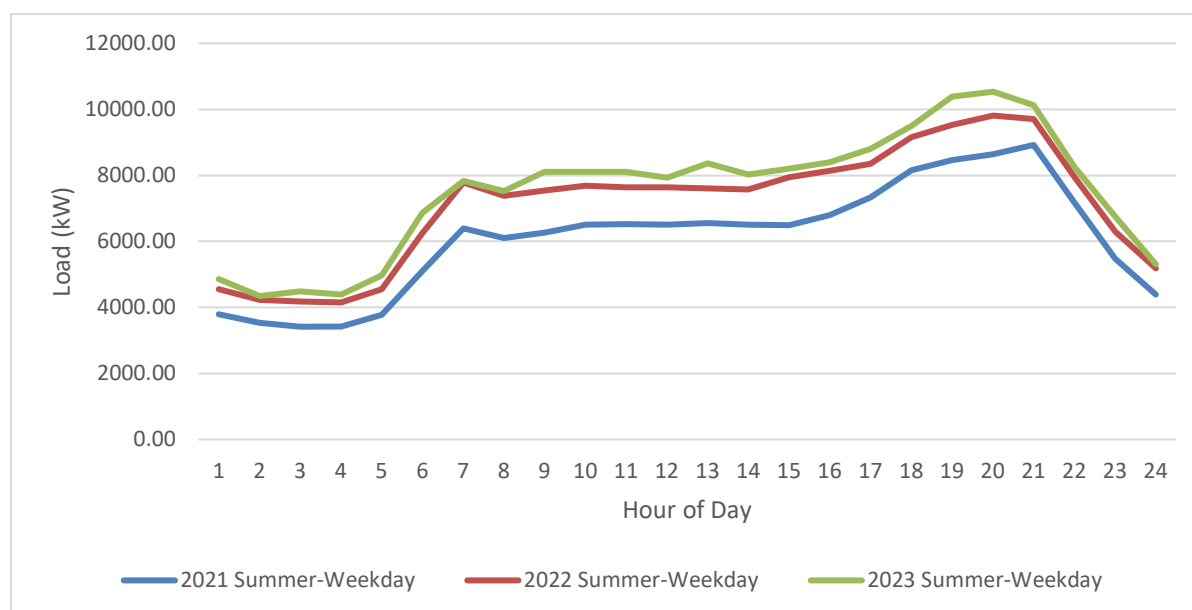


Figure 4-10 Cloetesville 2021, 2022, 2023 Summer Weekday Profiles Comparison (load shedding excluded)

Unlike Stellenbosch, the Cloetesville load (with load shedding removed) in **Figure 4-10** above appears to be gradually increasing from 2021 to 2023.

4.2.3.3 Franschhoek

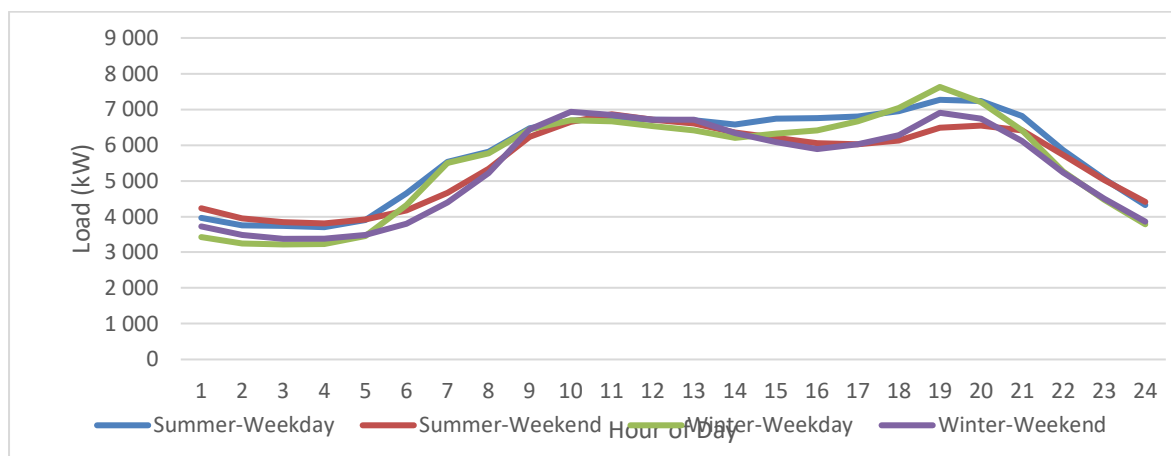


Figure 4-11 Franschhoek 2022 Average Day Load Profiles (excluding load shedding)

Franschhoek experiences slight seasonal variations in electricity consumption. In the summer, weekday demand appears to be relatively high compared to other periods. This could be due to several factors such as increased tourism, outdoor events, or higher occupancy rates in commercial establishments in Franschhoek during the summer months.

Similar to Stellenbosch and Cloetesville, there is also a difference in electricity consumption between weekdays and weekends in Franschhoek, albeit to a lesser degree. Weekday consumption is higher than weekend consumption across all seasons, indicating the influence of commercial and industrial activities during the weekdays.

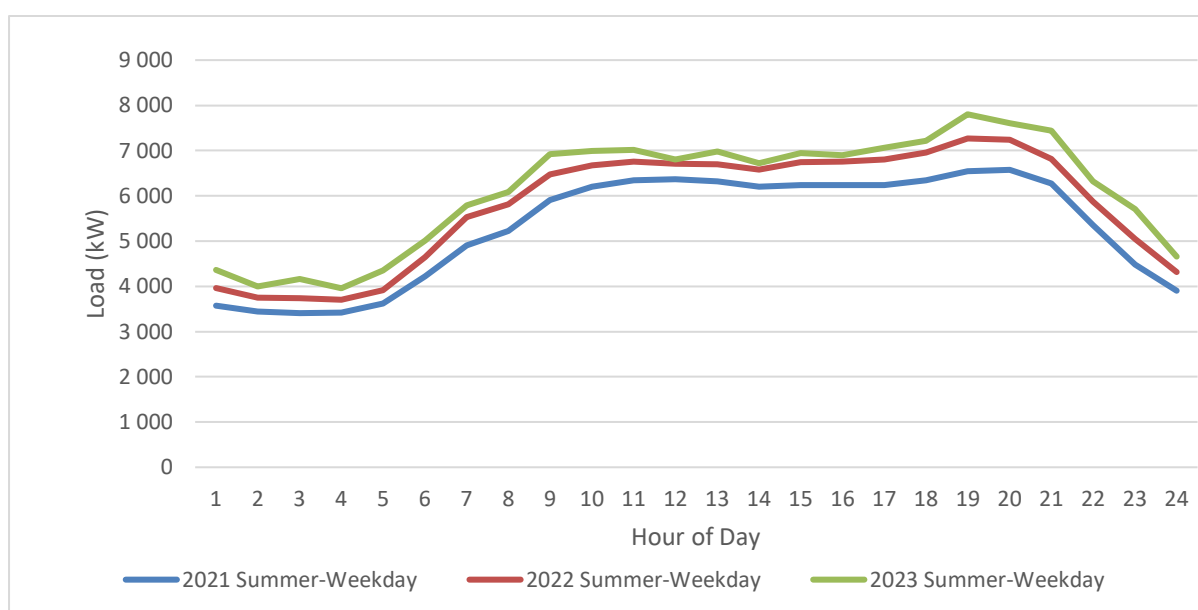


Figure 4-12 Franschhoek 2021, 2022, 2023 Summer Weekday Profiles Comparison (load shedding excluded)

Also similar to Cloetesville (but different to Stellenbosch), the load at Franschhoek (with load shedding removed) in **Figure 4-12** above appears to be gradually increasing from 2021 to 2023.

4.2.3.4 Pniel

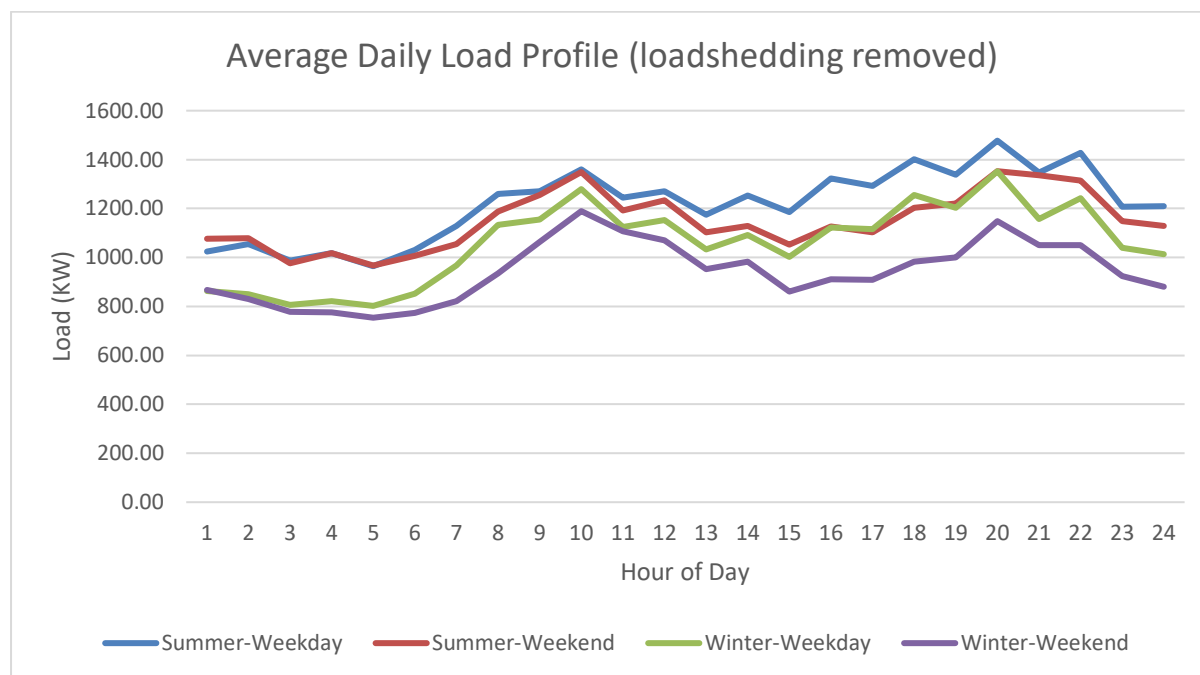


Figure 4-13 Pniel 2022 Average day Load Profiles (load shedding excluded)

Pniel too experiences seasonal variations in electricity consumption. Consumption tends to be higher during the summer months compared to the winter months. Likely due to increased use of air conditioning and cooling systems to combat the heat during the summer and due to the agricultural sector's irrigation needs.

There is also a difference in electricity consumption between weekdays and weekends in Pniel. Weekday consumption is higher than weekend consumption across all seasons, indicating the impact of commercial and industrial activities during the weekdays. Peak electricity consumption in Pniel occurs during the late afternoon and early evening hours.

Pniel shows a similar year-on-year trend to Stellenbosch, with 2023 load (with load shedding removed) being significantly lower than 2021 and 2022. See **Figure 4-14** below. Due to the load being significantly smaller at Pniel compared to other supply points, the averaged profiles do not see the same "smoothing" effect with the load behaviour being dominated by a few large consumers. Since the lower demand in 2023 appears across all hours of the

day, it is not clear whether this is as a result of embedded generation or possibly reduced demand from customers in this area.

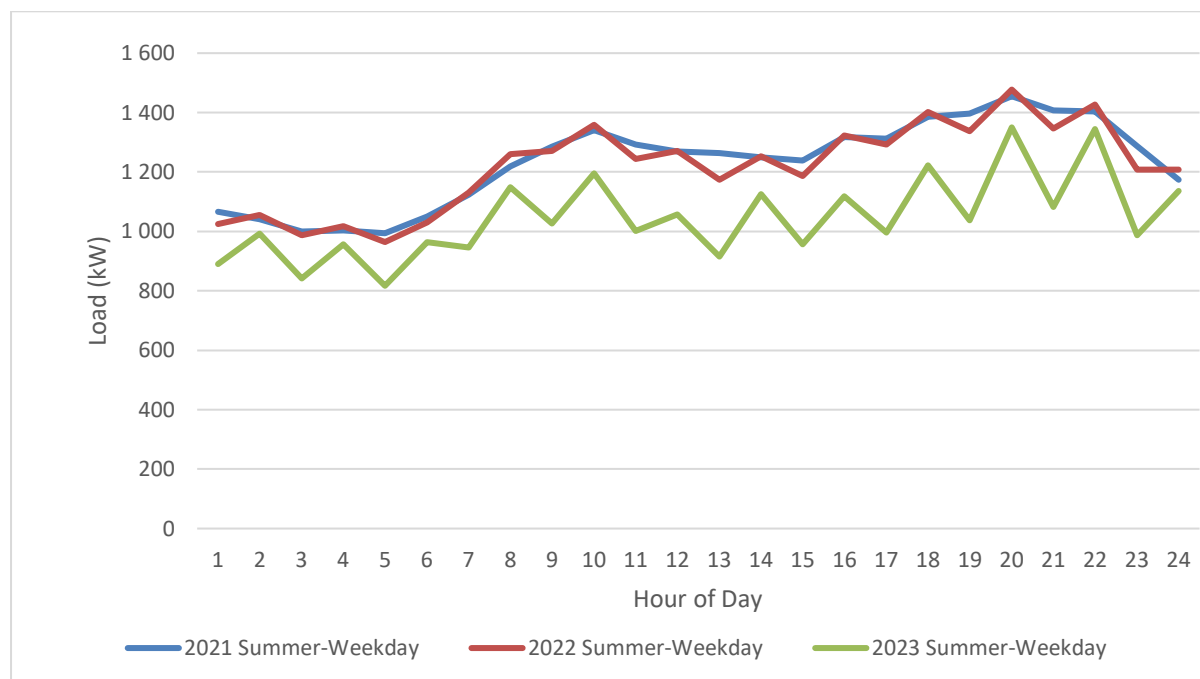


Figure 4-14 Pniel 2021, 2022, 2023 Summer Weekday Profiles Comparison (load shedding excluded)

4.2.4 SUMMARY OF IMPACT OF LOAD SHEDDING ON DEMAND

As presented in **Section 4.2.3**, the historical load shedding data for 2021 to 2023 indicates the significant increase in total load shedding hours from 2021 to 2023 which has a direct impact on the total electricity demand (GWh).

Figure 4-15 and **Figure 4-16** below show the total electricity demand (GWh) with and without load shedding included. When load shedding is included, the total energy demand reduced by 1% from 2021 to 2022 and 10% from 2022 to 2023. When load shedding is excluded, the total energy demand increased by 4% from 2021 to 2022 and was essentially the same from 2022 to 2023. The stagnation in energy demand from 2022 to 2023 does not necessarily mean that demand in the region was not increasing, but rather perhaps that the increase in demand was offset by the installation of embedded solar PV systems.

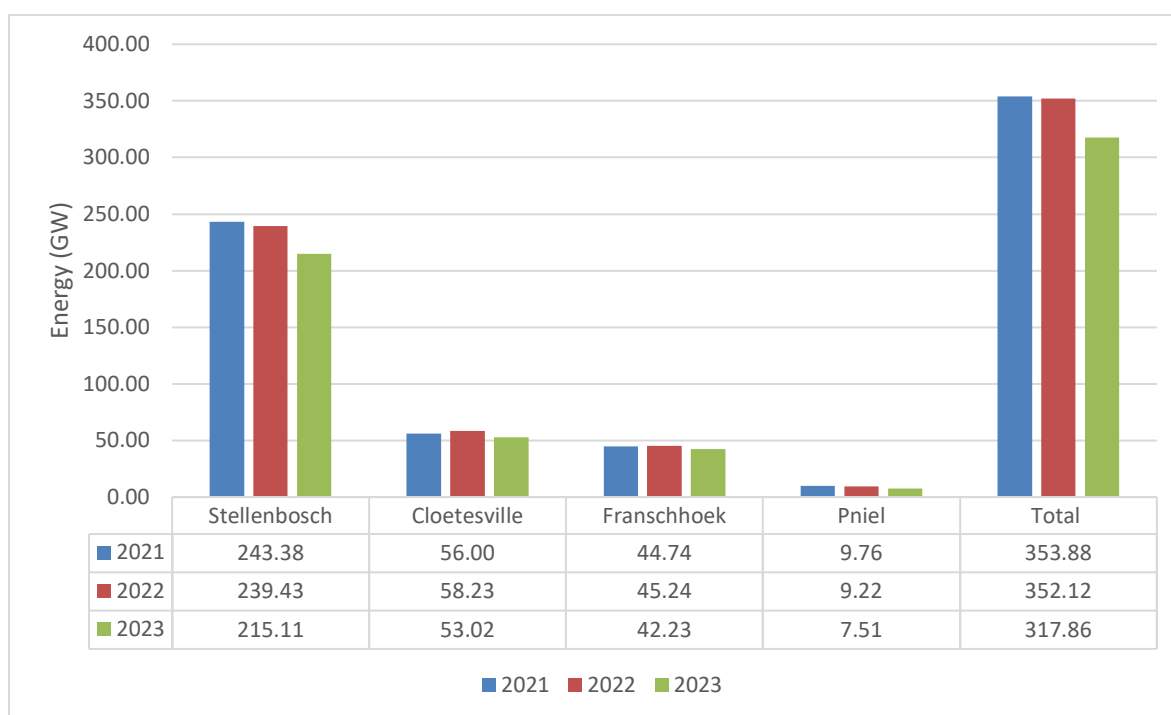


Figure 4-15 Total Energy Demand with Load Shedding Included

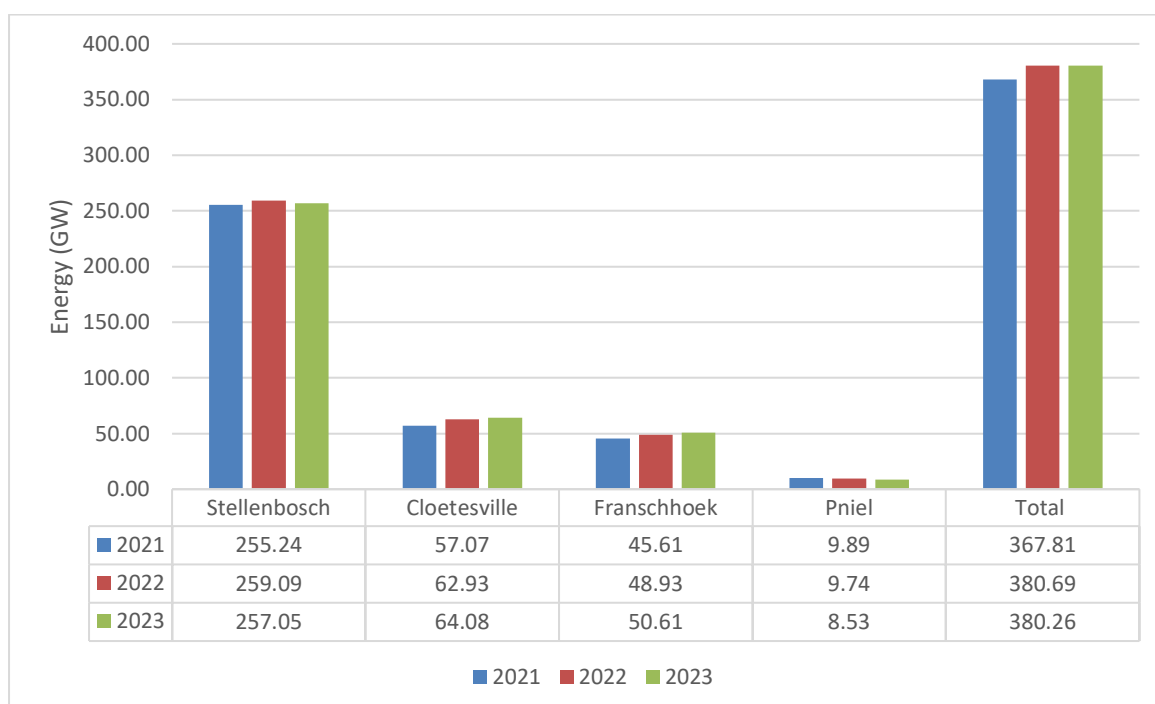


Figure 4-16 Total Energy Demand with Load Shedding Excluded

4.2.5 LOAD PROFILE ADOPTED FOR MODELLING

The 2022 load profile and associated load shedding activity were adopted for the purpose of Energy Generation and Storage Dispatch Modelling (and subsequent financial modelling). The level of load shedding experienced in 2023 was much higher than 2022, and the 2023 levels of load shedding have (thus far) not been experienced in 2024. Thus far, 2024 levels of load shedding have been closer to 2022 as depicted in **Figure 4-18**

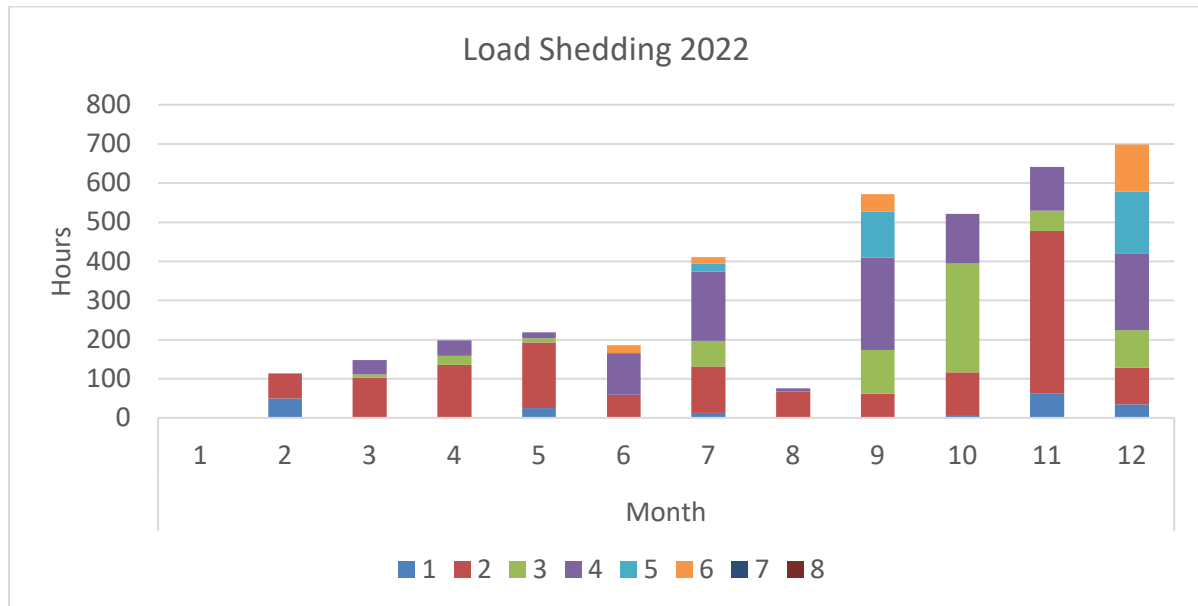


Figure 4-17 Load Shedding Hours for 2022

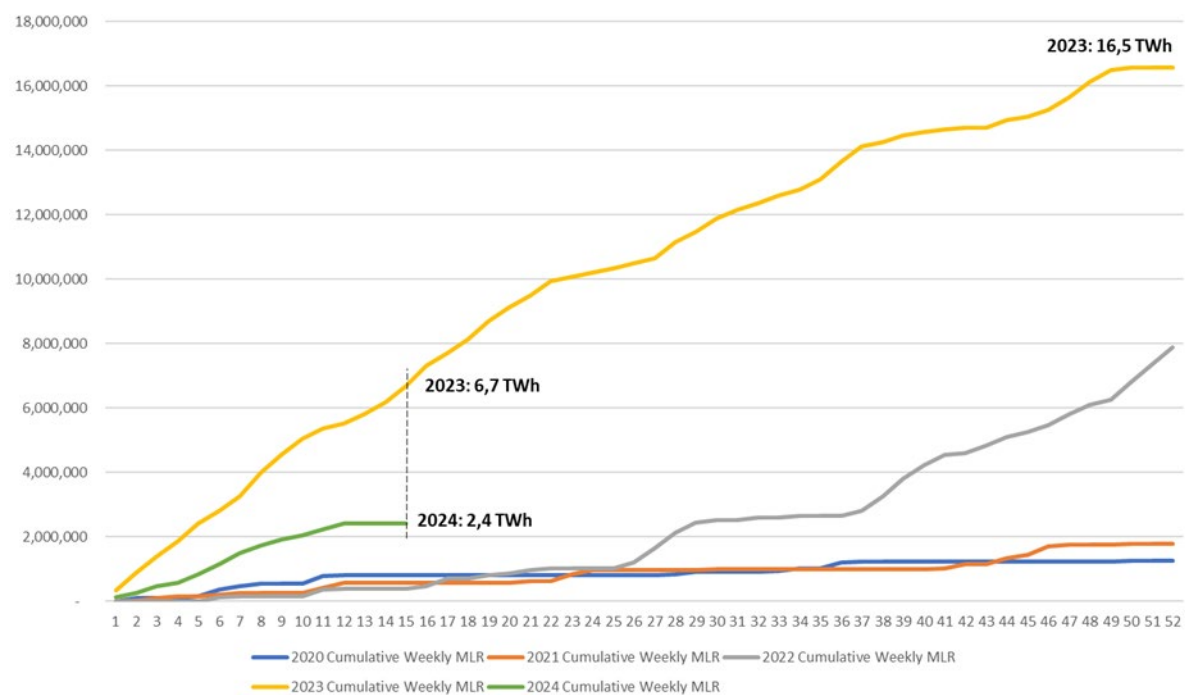


Figure 4-18 Cumulative Weekly Load Shedding year on year

4.3 IDENTIFYING THE OPTIONS

4.3.1 OVERVIEW

In considering the Needs Analysis and output specifications as detailed in **section 3.7** of this feasibility study report, several potential solar PV only and solar PV with BESS technical configurations and options were identified.

The following factors were considered to guide the development of the options:

- The size and profile of the load at the various supply points
- How Eskom would recognise and treat the operation of the solar PV plant and BESS options with respect to load shedding and load reduction / load curtailment
- The grid capacity and strength within the Municipal distribution network
- The availability of land / projects to connect within the Municipal distribution network
- The benefits / drawbacks of purely behind-the-meter connections vs net-metering and/or wheeling arrangements
- Whether the Municipality will be a loadshedding or load curtailment customer⁹

The options identified are summarised in **Table 4-3**.

⁹ The TA Team understands that the Municipality is currently a loadshedding customer, according to Eskom, and loadshedding in the Municipality is currently controlled by Eskom, however, the Municipality has commissioned another assignment with Lyners to assess various options for the Municipality to become a load curtailment customer. We understand that a proposal has been submitted to Eskom for their consideration in terms of the Municipality becoming a load curtailment customer. This feasibility study therefore provides and assesses technical options, in terms of solar PV and BESS, which could be operated under the two different scenarios of loadshedding vs load curtailment.

Table 4-3 Overview of the Technical Solution Options

	Option	Solar PV	BESS	Load Shedding vs. Curtailment	Connection Configuration
1	A	√		Load shedding	Four plants, behind-the-meter at each supply point
	A NLS	√		No Load shedding	Four plants, behind-the-meter at each supply point and where no load shedding is experienced
	B	√		Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering or wheeling to other supply points
	C	√		Load shedding	One plant, connected to Eskom network, wheeling to all supply points
2	A	√	√	Load shedding	Four plants, behind-the-meter at each supply point
	B	√	√	Load shedding	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points
	A NLS	√	√	No Load shedding	An additional scenario was modelled for option 2A where no load shedding is experienced.
	A 10S	√	√	Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size at Stellenbosch supply point
	A 10S NLS	√	√	No Load shedding	An additional scenario was modelled for option 2A with a smaller (10 MWh) BESS size at Stellenbosch supply point and where no load shedding is experienced.
3	A	√	√	Load curtailment	Four plants, behind-the-meter at each supply point
	B	√	√	Load curtailment	One plant behind-the-meter at Stellenbosch supply point, net-metering to other supply points

4.3.2 TECHNICAL SOLUTION OPTION 1 – SOLAR PV PLANT ONLY

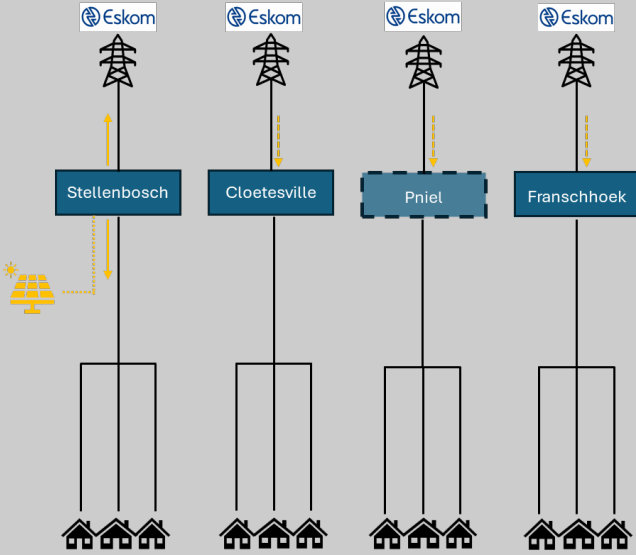
Technical Solution Option 1 considers solar PV generation to meet the strategic objectives of reduced Eskom supply, and sustainable supply. Solar PV generation is used to directly off-set energy (kWh) supplied by Eskom. Three different technical configurations were considered. Each of these configurations is described below.

4.3.2.1 Option 1 A: 4x Solar PV Plants connected behind-the-meter

Item	Description
	<p>The diagram illustrates four Eskom supply points: Stellenbosch, Cloeteville, Pniel, and Franschhoek. Each supply point is represented by a substation icon with an Eskom logo. Below each substation is a solar PV plant icon. The plants are connected to the main municipal busbar immediately downstream of the Eskom PoS. Each supply point serves a group of houses, represented by house icons at the bottom of each column.</p>
Technology	This option assumed solar PV plant only with no BESS.
Salient Features of option	<p>In this option it is assumed that there are four solar PV plants that are connected, one behind each of the Municipal supply points. The plants reduce the electrical energy required from Eskom at each of the supply points when they are producing electricity during hours of sunshine.</p> <p>As there is no grid forming generation present in this option, the solar PV plants would have to be offline during a load shedding event, whether grid connected or islanded. Therefore, this option only addresses the reduction of Eskom supply and does not address security of supply.</p>
Connection point/s	<p>It is assumed that each solar PV plant will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, plants could connect to other parts of the Municipal distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>
Wheeling / Net-metering	Assume no wheeling or net-metering occurs between the Municipal supply points, and the plants do not feedback any excess energy to Eskom (the plants curtail output if there is an excess).

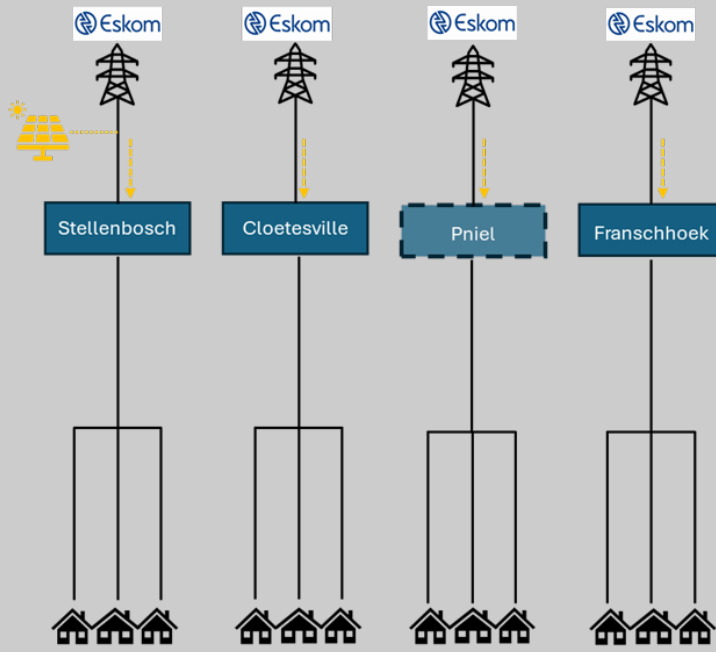
Item	Description
Size	The sizing of the plants is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy to 10%
Load shedding vs load curtailment	This option assumes that the Municipality is a load shedding customer and not a load curtailment customer. Load shedding could be conducted either by Eskom or the Municipality.

4.3.2.2 Option 1 B: 1x Solar PV Plant connected behind-the-meter

Item	Description
	
Technology	This option assumed solar PV plant only with no BESS.
Salient features of option	<p>In this option there is one solar PV plant that is connected behind the Stellenbosch meter. Connection at Stellenbosch was selected because:</p> <ol style="list-style-type: none"> 1. It would result in the lowest quantum of wheeled/net-metered energy to other supply points (since Stellenbosch has the largest load) 2. Stellenbosch has the largest capacity Eskom connection. Other supply points would see a capacity limit based on the capacity of the upstream Eskom transformers (40 MVA at Franschhoek and Cloetesville).

Item	Description
	<p>This option assumes that the plant directly reduces the electrical energy consumption from Eskom at the Stellenbosch meter and indirectly at the other supply points by wheeling/net-metering the excess generation from Stellenbosch to the other supply points.</p> <p>As there is no grid forming generation present in this option, the solar PV plant will be offline during a load shedding event at Stellenbosch, whether the solar PV plant is grid connected or islanded. Therefore, this option addresses the reduction of Eskom supply only and does not address security of supply.</p>
Connection point/s	<p>It is assumed that the solar PV plant will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, the plant could connect to other parts of the Stellenbosch distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>
Wheeling / Net-metering	<p>Wheeling or net-metering from Stellenbosch supply point to the other three supply points is assumed.</p>
Size	<p>The sizing of the plant is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy to 10%.</p>
Load shedding vs load curtailment	<p>This option assumes that the Municipality is a load shedding customer and not a load curtailment customer. Load shedding could be conducted either by Eskom or the Municipality.</p>

4.3.2.3 Option 1 C: 1x Solar PV Plant connected to Eskom Network

Item	Description
	 <p>The diagram illustrates a solar PV plant connected to the Eskom network at four locations: Stellenbosch, Cloeteville, Pniel, and Franschoek. Each location has a substation (Eskom logo) and a distribution network (represented by a tree structure) serving residential areas (represented by house icons). The Pniel substation is highlighted with a dashed border.</p>
Technology	This option assumed solar PV plant only with no BESS.
Salient features of option	<p>In this option there is one solar PV plant that is connected at any suitable location on the Eskom network. Electrical energy is wheeled to each of the supply points. It is assumed for purposes of modelling that the solar PV plant will be in a different region i.e. an area of high solar resource and available grid capacity (outside of the Greater Cape region).</p> <p>This option addresses the reduction of Eskom supply only. The option does not address security of supply.</p>
Connection points	<p>In this option there is one solar PV plant that is connected at any suitable location on the Eskom network.</p> <p>A variation is that the plant can be situated within the Stellenbosch Municipal boundary but connected to the Eskom network (lower solar resource compared to other regions but meets other Municipal requirements e.g. procurement / economic development etc.).</p>
Wheeling / Net-metering	Energy would be wheeled from the plant to the four points of supply.

Item	Description
	If the plant was connected close to the supply points (e.g. within the Municipal boundary) it may be eligible for net-metering (instead of wheeling).
Size	The sizing of the plant is determined as part of the technical assessment.
Load shedding vs load curtailment	This option assumes that the Municipality is a load shedding customer and not a load curtailment customer. Load shedding could be conducted either by Eskom or the Municipality.

4.3.2.4 Other Options

There are other options that have not been considered as they either fall outside the scope of this feasibility study, are expected to be less financially viable, etc., these include:

- ‘Virtual Plant’ – Capacity can be purchased from multiple solar farms or any number of generation facilities for that matter, connected at any point on the Eskom network. Capacity can be purchased through other market players such as traders.
- ‘Hybrid Solution’ – Combination of independent plants and wheeling/net metering – e.g. if option 1A is the preferred option, but all solar PV plants cannot connect behind their respective meters. Those that cannot connect could then be part of a combined plant behind one meter.
- The solar PV solutions are also possible if the Municipality becomes a load curtailment customer. In this case, the solar PV plants would not need to shut down during load shedding. The solar PV plants would reduce the “normal demand profile” of the Municipality and other load curtailment methods (not involving a BESS) would need to be used to reduce load (e.g. requesting large power consumers to reduce consumption).

4.3.3 TECHNICAL SOLUTION OPTION 2 – SOLAR PV AND BESS (LOAD SHEDDING REDUCTION)

Technical Solution Option 2 considers a solar PV plant combined with a BESS to meet the strategic objectives of reduced Eskom supply, sustainable supply, as well as security of supply. The security of supply is addressed through mitigating a quantum of loadshedding and assumes that the Municipality is a load shedding customer. Two different technical configurations were considered under Option 2. Each of these configurations is described below.

4.3.3.1 Option 2 A: 4x Solar PV and BESS Plants connected behind-the-meter

Item	Description
Technology	This option assumed solar PV plant combined with BESS.
Salient features of option	<p>In this option there are four solar PV and BESS plants that are connected behind each of the Municipal meters. Each system operates independently.</p> <p>This option addresses the reduction of Eskom supply (only by the solar PV plant) and reduces loadshedding using a combination of solar PV and BESS plant.</p>
Connection points	<p>It is assumed that each solar PV and BESS plant will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, plants could connect to other parts of the Municipal distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>

Item	Description
Wheeling / Net-metering	No wheeling or net-metering occurs between the Municipal supply points, and the plants do not feedback any excess energy to Eskom (the plants curtail output if there is an excess).
Size	The sizing of the solar PV plants is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy to 10%.
Load shedding vs load curtailment	<p>This option assumes that the Municipality is a load shedding customer and not a load curtailment customer.</p> <p>Additional load shedding must be conducted by the Municipality in case the solar PV plant and BESS are not sufficient to cover the full load during a load shedding event. i.e. the Municipality would need to have the ability to self-load shed.</p>
Operational Philosophy during load shedding	<p>During normal operation, i.e. when a loadshedding event is not in progress, solar PV plant first charges BESS, with excess supplying the Municipal load. The BESS also charges from grid (if not fully charged from solar PV), but only during off-peak times, and charges in such a way as to never exceed the respective NMD of the supply point.</p> <p>The BESS only discharges during a loadshedding event.</p> <p>When a loadshedding event is in progress, the solar PV plant first supplies the load, with excess solar (if any) charging the BESS, or curtailed if the BESS is fully charged. If the PV is not sufficient to supply the entire load, the BESS will discharge to meet the remaining load. If the BESS is fully depleted, the solar PV will shut down (if it was producing), and any remaining load would need to be load shed by the Municipality.</p>

4.3.3.2 Option 2 B: 1x Solar PV and BESS Plant connected behind-the-meter

Item	Description
Technology	This option assumed solar PV combined with BESS.
Salient features of option	<p>In this option there is one solar PV and BESS that is connected behind the Stellenbosch meter. Connection at Stellenbosch was selected because:</p> <ol style="list-style-type: none"> 1. It would result in the lowest quantum of wheeled/net-metered energy to other supply points (since Stellenbosch has the largest load) 2. Stellenbosch has the largest capacity Eskom connection. Other supply points would see a capacity limit based on the capacity of the upstream Eskom transformers (40 MVA at Franschhoek and Cloeteville). <p>The plant directly reduces the electrical energy consumption from Eskom at the Stellenbosch meter and indirectly at the other supply points by wheeling/net-metering the excess generation from Stellenbosch to the other supply points.</p> <p>This option addresses the reduction of Eskom supply (only by the PV plant) and reduces loadshedding using a combination of PV and BESS.</p>

Item	Description
Connection points	<p>It is assumed that the solar PV and BESS will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, the plant could connect to other parts of the Stellenbosch distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>
Wheeling / Net-metering	Wheeling/Net-metering from Stellenbosch supply point to the other three supply points is assumed.
Size	The sizing of the plants is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy to 10%.
Load shedding vs load curtailment	<p>This option assumes that the Municipality is a load shedding customer and not a load curtailment customer.</p> <p>Additional load shedding must be conducted by the Municipality (in case the solar PV and BESS are not sufficient to cover the full load during a load shedding event. The Municipality would need to have the ability to self-load shed.</p> <p>This option is only possible if Eskom views the Stellenbosch Municipality load (from all supply points) in aggregate e.g. a reduction of load at the Stellenbosch meter which is equal to the demand at Cloetesville, Pniel and Franschoek will be viewed the same as 'load shedding' of those supply points.</p> <p>Our understanding through discussion with Eskom is that this option may only be possible for Municipal loads connected through the same Eskom substation. Further confirmation is required from Eskom.</p>
Operational Philosophy during load shedding	During normal operation, i.e. when a loadshedding event is not in progress, the solar PV plant first charges the BESS, with any excess first supplying the load at the Stellenbosch supply point, and any further excess feeding back into the grid for net-metering. The BESS also charges from the Eskom grid (if not fully charged from the solar PV), but only during off-peak times, and charges in such a way as to never exceed the NMD of the Stellenbosch supply point.

Item	Description
	<p>The Stellenbosch supply area is currently load shed by Eskom in block 2, while Cloetesville, Franschhoek and Drakenstein are currently load shed by Eskom in block 8.</p> <p>The BESS only discharges during a loadshedding event.</p> <p>When a loadshedding event at the Stellenbosch supply point is in progress, the solar PV plant continues normal operation, and the BESS will discharge to meet the remaining load. If the BESS is fully depleted, the solar PV will shut down (if it was producing), and any remaining load would need to be load shed by the Municipality.</p> <p>When a loadshedding event at the Cloetesville, Pniel or Franschhoek supply points is in progress (assuming all are load shed in the same block), the PV plant continues normal operation, and the BESS will discharge to meet the combined load at Cloetesville, Pniel and Franschhoek. If the BESS is depleted, the load at Cloetesville, Pniel and Franschhoek will need to be load shed by the Municipality. The solar PV plant can continue normal operation because it is connected at Stellenbosch which is not being load shed at the same time.</p>

4.3.3.3 Other options

There are other options that have not been considered as they either fall outside the scope of this feasibility study, are expected to be less financially viable, etc., these include:

- PV Plants are offline during Eskom event of load shedding
- BESS only – grid charged, no solar PV plants
- BESS is only grid charged; solar PV only supplies the load
- BESS does not charge from grid (only solar PV)
- One Solar PV at Stellenbosch, four BESS (one at each supply point)
- Solar PV plant and BESS connected on Eskom network

4.3.4 TECHNICAL SOLUTION OPTION 3 – SOLAR PV AND BESS (LOAD CURTAILMENT)

Technical Solution Option 3 considers a solar PV plant as well as BESS to meet the strategic objective of reduced Eskom supply, sustainable supply, as well as security of supply. The security of supply is addressed through consistent load curtailment as and when required by

Eskom and assumes that the Municipality is a load curtailment customer. Two different technical configurations were considered. Each of these configurations is described below.

4.3.4.1 Option 3 A: 4x Solar PV and BESS Plants connected behind-the-meter

Item	Description
Technology	This option assumed solar PV combined with BESS.
Salient features of option	<p>In this option there are four solar PV plants for Eskom load reduction, and four additional solar PV and BESS plants that are dedicated to load curtailment. All systems are connected behind each of the Municipal meters. Each system behind each supply point operates independently.</p> <p>The rationale for the separate dedicated load curtailment solar PV and BESS plants is to ensure that these plants are not considered to be part of the “normal demand profile” / curtailment baseline (CBL) and can then be used to provide the load curtailment requirements. We assume these plants will be shut down when no load curtailment is in progress.</p> <p>This option addresses the reduction of Eskom supply (by the PV plant) and reduces loadshedding using a combination of PV and BESS for load curtailment.</p>

Item	Description
Connection points	<p>It is assumed that each of the solar PV and BESS plants will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, plants could connect to other parts of the Municipal distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>
Wheeling / Net-metering	No wheeling or net-metering occurs between the Municipal supply points, and the plants do not feedback any excess energy to Eskom (the plants curtail output if there is an excess).
Size	The sizing of the plants is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy by 10%.
Load shedding vs load curtailment	This option assumes that the Municipality is a load curtailment customer and not a load shedding customer.
Operational Philosophy during load curtailment	<p>During normal operation, i.e. when load curtailment is not required, the Eskom supply reduction PV plants are operational, and each plant is supplying the load at its respective supply point. The dedicated load curtailment solar PV plants will charge the BESS, and once the BESS is fully charged, the dedicated load curtailment solar PV plants and BESS will remain idle i.e. the dedicated load curtailment solar PV plants will reduce their output to 0 (i.e. 100% solar generation curtailment).</p> <p>The BESS only discharges during a load curtailment event, and only charges from solar PV (never charges from the grid).¹⁰</p>

¹⁰ During an AMEU workshop on NRS048-9 Edition 3 held on 25th April 2024, Eskom verbally indicated that an energy storage system which is being used for load curtailment may charge from the grid if the charging does not increase the “normal demand profile” by approximately 10%. This is contrary to the wording in NRS048-9 Edition 3 which states that “Customers who participate under the notified load curtailment scheme shall not exceed normal demand profile for 12 h after the emergency”. Therefore, our assumption for Technical Option 3 is that the BESS will only be charged from solar PV and not from the grid.

Item	Description
	<p>When load curtailment is required by Eskom, the Eskom supply reduction solar PV plants continue to operate – this reduces the curtailment baseline (CBL) against which the required percentage of load reduction is calculated¹¹.</p> <p>The dedicated load curtailment solar PV plants then supply the load curtailment requirement, with excess generation (if any) charging the BESS, or curtailed if the BESS is fully charged. If the PV is not sufficient to supply all of the load curtailment requirement, the BESS will discharge to provide the remaining load curtailment requirement. If the BESS is fully depleted, both the Eskom supply reduction solar PV plants and the dedicated load curtailment solar PV plants will remain online (if they are producing), and any remaining load curtailment requirement would need to be met by other forms of load reduction conducted by the Municipality (e.g. communicating with large power consumers so that they reduce consumption by the required amount).</p>

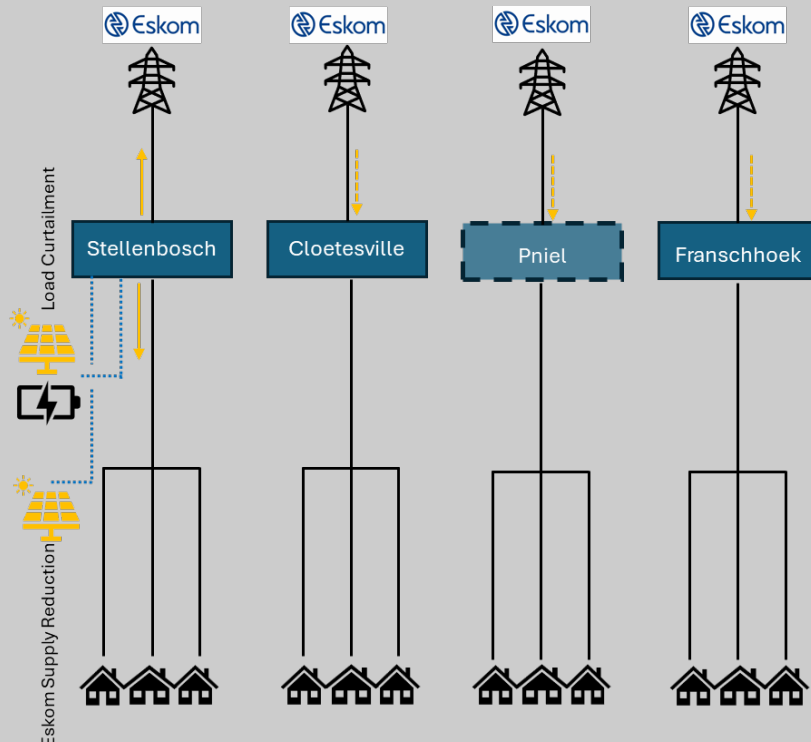
4.3.4.2 Other options

There are other options that have not been considered as they either fall outside the scope of this feasibility study, are expected to be less financially viable, etc., these include:

- No Eskom Supply Reduction Solar PV plants, only dedicated Load Curtailment Solar PV Plants and BESS included. Will have an impact on calculated Curtailment Baseline (CBL), and therefore the load curtailment requirements.
- Option for wheeling between supply points using small amount of excess potentially available at each supply point (commercial option)
- Possibility to feed and sell excess power to Eskom/Third party.

¹¹ The required percentage of load reduction for each stage is detailed in NRS048-9 Edition 3. Higher stages of load shedding require higher percentages of load reduction. The percentage reduction is applied to the “normal demand profile” or “curtailment baseline (CBL)” as defined in NRS048-9 Edition 3. The four solar PV plants which are providing Eskom supply reduction would be part of the “normal demand profile” or “CBL” and hence would not be counted as load reduction. For example, if the historical demand at a particular supply point was 50 MW during the day, and 40 MW was being generated by the Eskom supply reduction solar PV plants, then the residual / “normal demand profile” would be 10 MW during the day. Then, during Stage 2 load shedding, the required percentage reduction of 10% would be applied to the 10 MW residual / “Normal demand profile”, meaning that only 1 MW of further load reduction would be required (this 1 MW load reduction would then be supplied by the dedicated load curtailment solar PV and BESS plant).

4.3.4.3 Option 3 B: 1x Solar PV Plant and BESS Plant connected behind-the-meter

Item	Description
	
Technology	This option assumed solar PV combined with BESS.
Salient features of option	<p>In this option there is one solar PV plant for Eskom load reduction, and one additional solar PV and BESS plant that is dedicated to load curtailment. Both plants are connected behind the Stellenbosch meter.</p> <p>The rationale for the separate dedicated load curtailment solar PV and BESS plant is to ensure that this plant is not considered to be part of the “normal demand profile” / curtailment baseline (CBL) and can then be used to provide the load curtailment requirements. We assume this plant will be shut down when no load curtailment is in progress.</p> <p>This option assumes that Eskom views the Stellenbosch Municipality load from all supply points in aggregate e.g. the load curtailment requirements for the Municipality will be based on the aggregate load but can be achieved through load reduction at any of the supply points. This is consistent with the “Group Curtailment” concept in NRS048-9.</p>

Item	Description
	This option addresses the reduction of Eskom supply (by the PV plant) and reduces loadshedding using a combination of PV and BESS for load curtailment.
Connection points	<p>It is assumed that the solar PV and BESS will connect at the main Municipal-owned busbar immediately downstream of the Eskom PoS.</p> <p>Alternatively, the plant could connect to other parts of the Stellenbosch distribution network (further downstream) if network capacity allows. The technical assessment of the options includes evaluation of the network capacity and strength at several possible connection points.</p>
Wheeling / Net-metering	Wheeling/Net-metering from Stellenbosch supply point to the other three supply points is assumed.
Size	The sizing of the plants is determined as part of the technical assessment, based on limiting the plant curtailment / excess energy by 10%.
Load shedding vs load curtailment	This option assumes that the Municipality is a load curtailment customer and not a load shedding customer.
Operational Philosophy during load curtailment	<p>During normal operation, i.e. when load curtailment is not required, the Eskom supply reduction PV plant is operational and supplying the load at Stellenbosch meter and indirectly at the other supply points by wheeling/net-metering the excess generation from Stellenbosch to the other supply points. The dedicated load curtailment solar PV plant will charge the BESS, and once the BESS is fully charged, the dedicated load curtailment solar PV plant and BESS will remain idle i.e. the dedicated load curtailment solar PV plant will reduce its output to 0 (i.e. 100% solar generation curtailment).</p> <p>The BESS only discharges during a load curtailment event, and only charges from solar PV (never charges from the grid).</p> <p>When load curtailment is required by Eskom, the Eskom supply reduction solar PV plant will continue to operate – this reduces the curtailment baseline (CBL) against which the required percentage of load reduction is calculated. The dedicated load curtailment solar PV plant will then supply the load curtailment requirement, with excess</p>

Item	Description
	generation (if any) charging the BESS, or curtailed if the BESS is fully charged. If the PV is not sufficient to supply all of the load curtailment requirement, the BESS will discharge to provide the remaining load curtailment requirement. If the BESS is fully depleted, both the Eskom supply reduction solar PV plant and the dedicated load curtailment solar PV plant will remain online (if they are producing), and any remaining load curtailment requirement would need to be met by other forms of load reduction conducted by the Municipality (e.g. communicating with large power consumers so that they reduce consumption by the required amount).

4.3.4.4 Other Options

There are other options that have not been considered as they either fall outside the scope of this feasibility study, are expected to be less financially viable, etc., these include:

- No Eskom Supply Reduction Solar PV plants, only dedicated Load Curtailment Solar PV Plants and BESS included. Will have an impact on calculated Curtailment Baseline (CBL), and therefore the load curtailment requirements.
- The Eskom Supply Reduction Solar PV Plant could be connected anywhere in the Eskom Network (wheeling), with the dedicated Load Curtailment Solar PV and BESS Plants still located at each supply point.
- BESS could be charged by the grid but only if the “normal demand profile” is not increased by more than 10%.

4.4 TECHNICAL ASSESSMENT

4.4.1 ENERGY GENERATION AND STORAGE DISPATCH MODELLING

4.4.1.1 General

Energy generation and dispatch models were developed for each Technical Solution Option.

The purpose of the energy generation and dispatch models was to simulate the energy performance of each technical solution option over one “representative” year. The simulations were based on hourly resolution and considered:

- Load profile for each supply point
- Hourly solar PV energy yield

- Charging and discharging philosophy of the BESS
- Round Trip Efficiency (“**RTE**”) losses experienced with the BESS
- State of Charge (“**SoC**”) of the BESS
- Solar PV curtailment (i.e. excess / unused solar PV energy)
- Residual Eskom / grid electricity consumption in each time-of-use period
- Load shedding and load curtailment requirements (i.e. timing and quantum of load reductions)
- Unserved energy (i.e. the residual quantum of load shedding which is still required even after implementing solar PV and BESS)
- Electricity flows through the Eskom network (in the case of technical solution options which involve wheeling)

The energy generation and dispatch models implement an “operational philosophy”, as described for each Technical Solution Option in **section 4.2.2** of this feasibility study report, for a given size of solar PV and BESS. In this case, the models were used to identify the size of solar PV and BESS which would result in a given quantity of solar PV curtailment / excess (which is one of the biggest impacts on the financial benefit of a solar PV system).

The energy generation and dispatch models were developed in Microsoft Excel.

4.4.1.2 Model Inputs and Assumptions

4.4.1.2.1 Load Profiles

The load profiles are described and presented in **section 4.2** of this feasibility study report.

4.4.1.2.2 Solar PV yield

A typical solar PV yield profile was developed for a solar PV plant located in Stellenbosch (generic site) using Pvsyst software.

The solar resource in the Stellenbosch, Drakenstein, and Franschhoek areas is reasonable, with annual Global Horizontal Irradiance (“**GHI**”) ranging from approximately 1,910 to 1,950 kWh/m². This is about 15% lower than the best solar resource areas in South Africa.

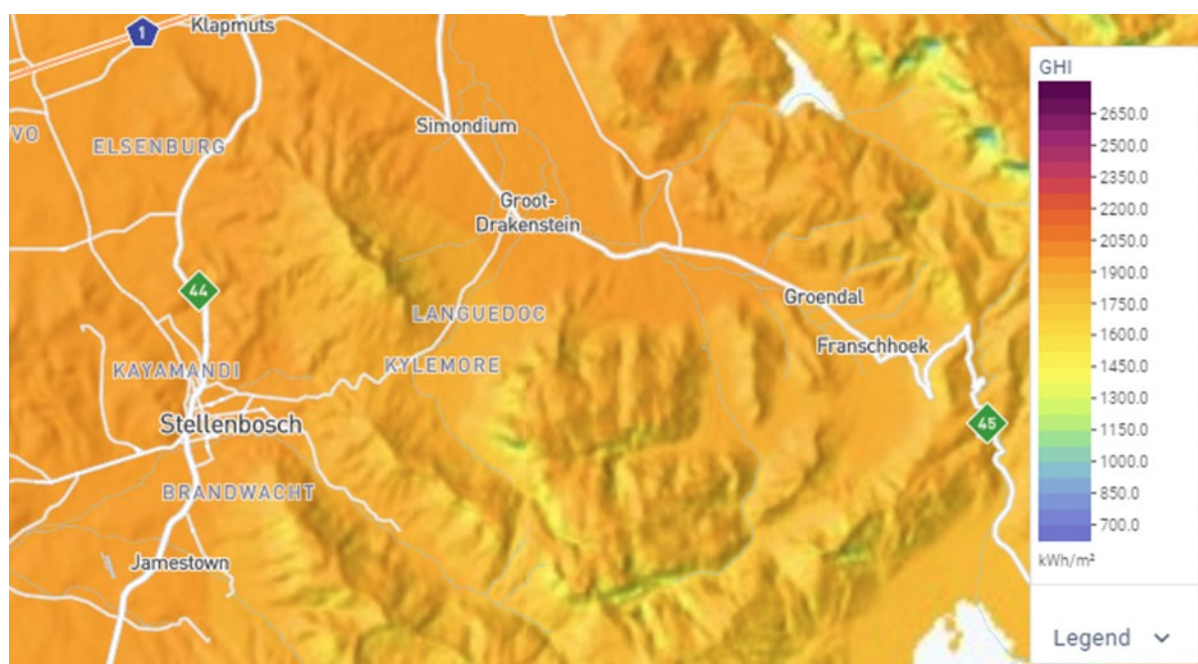


Figure 4-19 GHI in the Stellenbosch, Drakenstein, Franschhoek Areas

(Source: SolarGIS Prospect)

Long term solar resource data was obtained from Meteonorm 8.1, which is a database of satellite-based solar resource measurements. A typical (P50) solar resource profile, based on more than 15 years of historical data measurements for the Stellenbosch area was used as the basis for the PVsyst model.

Typical design parameters for a 65 MW_p / 54 MW_{AC} solar PV plant were selected and are summarized in **Table 4-4** below.

Table 4-4 Main Design Parameters Selected for Typical Solar PV Plant

Parameter	Units	Value
Nominal DC Capacity at STC	kW _p	65,001
PV Module Manufacturer	-	Astronergy
PV Module Model No.	-	CHSM78N(DG)/F-BH-630
PV Module Nominal Power (per module)	W _p	630
No. of PV Modules	-	103,176
Inverter Manufacturer	-	Sungrow
Inverter Model No.	-	SG1100UD-20
Inverter Nominal Power (per unit)	kW _{AC}	1,100
No. of Inverters	-	49
Total Inverter Power	kW _{AC}	53,900
DC / AC Ratio	-	1.21
Mounting Structure Type	-	Single-axis tracking

Axis azimuth	°	0°
Tracker Spacing	M	7.00
Ground Coverage Ratio (GCR)	%	35.2%
Angle of Rotation	°	±60°
Axis Height Above Ground	M	1.70

Typical loss assumptions were applied within the model, including typical first-year levels of system degradation. The loss assumptions and system design parameters were incorporated into the PVsyst simulation tool, which provided the key yield results shown in **Table 4-5** and **Figure 4-20** below.

Table 4-5 Energy Yield Results

Parameter	Units	Value
Annual Energy Yield (P50)	GWh	149
Performance Ratio	%	87.6%
Annual Specific Production	kWh/kWp	2,293

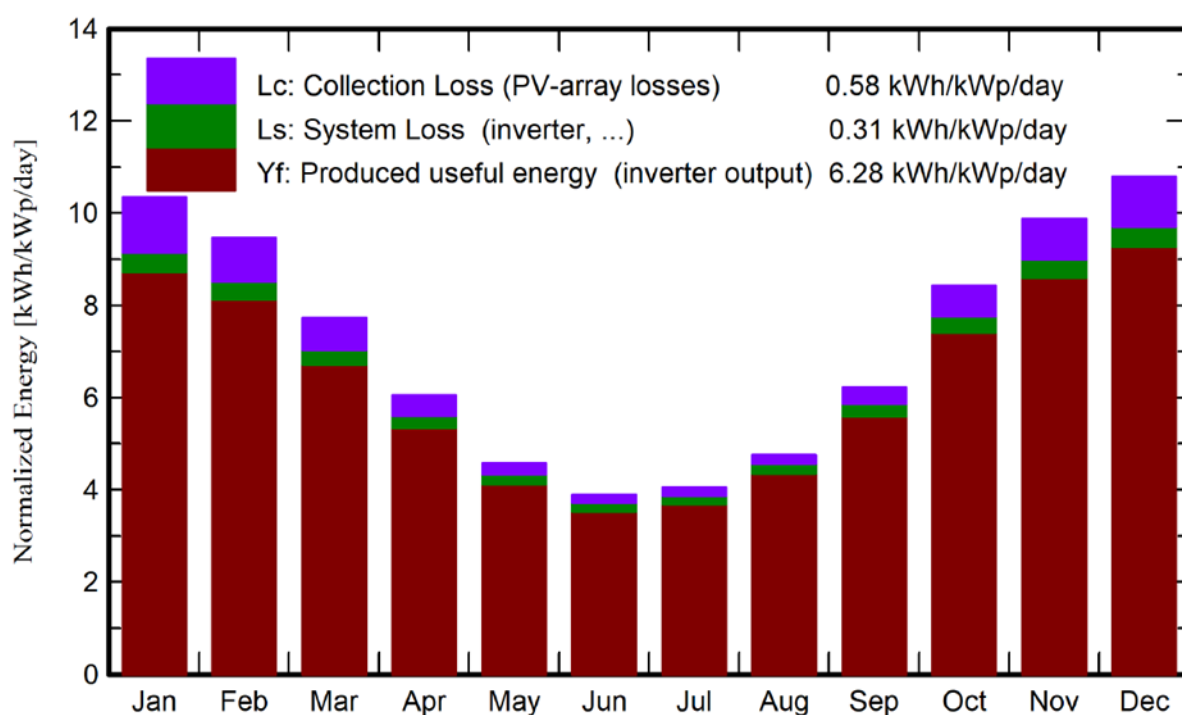


Figure 4-20 Normalised Energy Production per Month from a Single-Axis Tracking Solar PV Plant Situated in Stellenbosch

An hourly energy yield profile was exported from PVsyst. The energy yield was normalised based on the plant capacity and then scaled to the relevant size, depending on the requirements of the model / scenario.

4.4.1.2.3 BESS performance

For the Technical Solution Options which include a BESS (i.e. Option 2 and 3), typical BESS performance parameters were selected. **Table 4-6** below provides a summary of the key BESS performance parameters which were incorporated into the models.

Table 4-6 Main Design Parameters Selected for Typical BESS Plant

Parameter	Units	Value
Technology	-	Lithium Ion
Storage Duration	Hours	Technical Solution Option 2: 2 hrs Technical Solution Option 3: 4 hrs
RTE	%	88%
Depth of Discharge / Usable Capacity	%	80%

Other important assumptions that were made regarding BESS performance:

- Self-discharge was ignored (typically 1% to 2% of energy charge is lost per month).
- Cycle degradation was ignored.
- Charge and discharge rates were assumed to be equal (both limited to the MW power capacity of the BESS inverter).
- Performance impact of ambient temperature was ignored.

4.4.1.2.4 BESS charging / discharging

BESS charging and discharging philosophies are explained in **Section 4.3**. In summary:

- Technical Solution Option 2 (A and B):
 - BESS first charges from excess solar PV (if any).
 - If BESS is not fully charged from solar PV, off-peak grid electricity charges the BESS, ensuring that the NMD of the respective supply point is never exceeded.
 - BESS only discharges during events of load shedding, providing the difference between the required load and the available solar PV production.
- Technical Solution Option 3 (A and B):
 - BESS charges first from a dedicated “backup” solar PV system.
 - If BESS is not fully charged from the dedicated “backup” solar PV system, it may charge using excess solar PV (if any) from the main solar PV system.
 - BESS never charges from the grid.
 - BESS only discharges during events of load curtailment, providing the difference between the required portion of load reduction and the available solar PV production.
- No load shedding scenario:
 - BESS first charges from excess solar PV (if any).
 - If BESS is not fully charged from solar PV, off-peak grid electricity charges the BESS, ensuring that the NMD of the respective supply point is never exceeded.

- BESS discharges during peak time-of-use periods, providing the difference between the load and solar PV production (if any).

4.4.1.2.5 Load shedding

For Technical Solution Option 2, load shedding per supply point was applied as per the recorded load shedding from calendar year 2022, as further described in **Section 4.3.2**.

Cloetesville, Pniel, and Franschhoek were assumed to be on the same load shedding schedule / block, while Stellenbosch is on a different load shedding schedule / block.

4.4.1.2.6 Load reduction (Load curtailment)

For Technical Solution Option 3, it is assumed that Stellenbosch Municipality has become a load reduction / load curtailment customer. In this case, when load shedding is declared, the load at each supply point must be reduced at a fixed percentage of the normal load, depending on the stage of load shedding. The required reduction (as a percentage of normal load) for each stage of load shedding is shown in **Table 4-7** below (source: NRS048-9: 2023 Edition 3).

Table 4-7 Load Reduction per Load Shedding Stage

Load Shedding Stage	Load Reduction
0	0%
1	10%
2	10%
3	15%
4	20%
5	30%
6	30%
7	40%
8	40%

Based on our interpretation of NRS-048-9: 2023 (and confirmed through discussions held with Eskom), when embedded generation (such as solar PV) is connected within the municipal network and is operated / generating on an ongoing basis, its impact on the load profile becomes part of the normal load profile (or “curtailment base line”, using the terminology from NRS-048-9) i.e. the reduction it provides to the load (as seen at the Eskom supply point) is excluded from the percentage load reduction required as per **Table 4-7** above. Embedded generation can only contribute to the required load reduction as per **Table 4-7** above if it does not normally operate when load shedding is not in progress. For example, an embedded gas turbine generator or energy storage system (such as a BESS or pumped hydro storage) which is offline (i.e. not generating) when there is no load shedding, may be dispatched during load

shedding and would contribute to the required load reduction (i.e. the generation / storage system is only providing a dedicated “backup” function during load shedding).

However, it is important to note that an embedded solar PV plant which operates normally (i.e. day-in, day-out, irrespective of load shedding) does still have a positive impact on the level of load reduction required. For example, if the load at a particular Eskom supply point was 30 MW during the day, prior to installing the embedded solar PV system, then the load reduction required during Stage 3 load shedding would have been $30 \text{ MW} \times 15\% = 4.5 \text{ MW}$. Now, if a 25 MW embedded solar PV system was installed and was generating 25 MW of electricity during the day, the “normal” load at the Eskom supply point would be reduced to 5 MW. Then, during a Stage 3 load shedding event, the required load reduction would be just $5 \text{ MW} \times 15\% = 0.75 \text{ MW}$ i.e. by reducing the normal load the relative level of load reduction is also reduced and therefore becomes “easier” to meet with some form of dedicated backup generation or energy storage system.

As described in **Section 4.3.4**, for Technical Solution Option 3, we assume that there are essentially two embedded generation systems installed:

1. A large solar PV system which operates normally (irrespective of load shedding) and has a positive impact in terms of reducing the normal load.
2. A smaller solar PV system coupled with a BESS which essentially operates as a “backup” generation system, that only operates during load shedding and contributes to the required level of load reduction, depending on the stage of load shedding.

For clarity, the smaller solar PV plant and BESS are essentially switched off (generation curtailed) when there is no load shedding, which can mean significant underutilisation of these assets when there is no load shedding. The risk of reconfiguring these assets to operate when there is no load shedding, is that Eskom would no longer consider them as “backup” generators and would then not allow them to contribute to load reduction during load shedding, should it resume.

4.4.1.2.7 Solar PV plant and BESS online / offline

As described in **Section 4.3**, under certain conditions in Technical Solution Options 1 and 2, we assume that the solar PV plants and BESS would need to be shut down and/or output curtailed (i.e. output reduced to zero). The Energy Generation and Storage Dispatch Model caters for this in the following manner:

1. Technical Solution Option 1 (scenarios A and B): When load shedding is scheduled to occur at a particular supply point, the solar PV plant connected at that supply point must be shut down, irrespective of how much generation could have been provided. Reason: If, for example, load shedding was scheduled during the day and the solar PV plant could supply the full active energy (kW) load requirement at a particular supply point, without a

BESS, the municipal network would still need to rely on the Eskom network for system strength and stability. This means that the Eskom network is still being negatively impacted by the solar PV plant being online, even though there is negligible active energy (kW) being supplied.

2. Technical Solution Option 2: When load shedding is scheduled to occur at a particular supply point, the solar PV plant connected at that supply point may only remain in operation if the BESS at the same supply point has a SoC above zero. This means that the BESS is available to provide the system strength requirement, over and above the active energy (kW) requirement, and hence there is no reliance on the Eskom network. If the BESS has zero charge, then the solar PV plant will be shut down, to avoid reliance on the Eskom network for system stability
3. Technical Solution Option 3: Not applicable since Eskom is always supplying a portion of the load (and stability requirement) during a load shedding event.

4.4.1.3 Sizing of the Options

4.4.1.3.1 Sized based on solar PV curtailment

One of the key metrics in determining the financial viability of a solar PV plant is how much of its energy generation can be utilised (in this case, sold by the IPP to the off-taker) versus how much is curtailed or not able to be supplied (the off-taker must still pay for this “unused” or “deemed” energy, but receives no benefit from it).

The most financially viable point, in terms of quantum of delivered / used vs curtailed / unused / deemed energy, depends on the cost of the solar PV installation and the tariff at which the off-taker must purchase from alternative sources (in this case, the Municipality currently only has Eskom as the alternate source). Typically, a solar PV plant which only needs to curtail 5% to 15% of its total possible energy production (i.e. 85% to 95% of energy is delivered and usable by the off-taker) is most financially viable.

For this study, a nominal solar PV curtailment figure of 10% (i.e. middle-of-the-range) was assumed. Based on the experience of the consultants gained on other private solar PV projects, the financial optimization point is roughly between a nominal solar PV curtailment figure of 5%-15%. The 15% value was tested as part of the modelling, but the results showed a less favorable financial outcome. The Energy Generation and Storage Dispatch Models used a goal seek approach to determine the size of solar PV plant which would result in approximately 10% solar PV curtailment.

Since the model operates and dispatches differently for each of the Technical Solution Options (and scenarios within each option) according to the assumptions and requirements of that option or scenario, the resultant size of solar PV plant for each option and scenario differs slightly (as shown in the results presented in **Section 4.4.2.1**).

Sizing a BESS based on optimum financial viability is much more complex and depends on various factors such as capital cost of the BESS, utilization (or throughput) of the BESS (which depends on the operational philosophy / application of the BESS), and, in this case, the economic cost of unserved energy (i.e. energy not delivered to consumers due to the residual quantity of load shedding and/or load reduction required from consumers). It should also be noted that to completely eliminate load shedding through the use of a solar PV plant and BESS would almost certainly be unfeasible. Given that the level of load shedding in future is unknown (and could increase from current levels), or weather events such as long durations of cloudy weather in the winter, a BESS which completely reduces load shedding under all scenarios would need to be unfeasibly large. Even to deliver a complete reduction of load shedding based on the known conditions of 2022, the solar PV plant and BESS system would need to be sized extremely large to cater for the worst-case scenario of low solar production and high stages of load shedding. Results provided in **Section 4.4.2.1** demonstrate the continuum of diminishing return for progressively larger BESS vs unserved energy.

Noting the above, a practical approach was taken for BESS sizing with the objective of delivering a meaningful reduction to unserved energy / load shedding, based on the 2022 level of load shedding being the baseline. The following approach was taken:

1. Technical Solution Option 2: The power (kW) capacity of the BESS was selected based on approximately the peak demand measured from each supply point (not the NMD, but the actual maximum kW measured) to ensure that the BESS could supply the required kW during most times when solar PV is not available (e.g. night-time). Given that most load shedding timeslots are 2 hours, the energy (kWh) capacity was obtained by multiplying the power (kW) capacity by two. For example, at the Stellenbosch supply point, the peak demand measured in 2022 was approximately 50,000 kW. Therefore, the BESS size selected for the Stellenbosch supply point was 50,000 kW / 100,000 kWh.
2. Technical Solution Option 3: Approximately the same energy (kWh) capacity as per Technical Solution Option 2 was adopted but noting that the power (kW) capacity requirement would be much less (e.g. 10% to 30% of the normal load for stages 1 to 6 load shedding), the (kW) capacity was reduced by a factor of two. For example, at the Stellenbosch supply point, the 100,000 kWh energy capacity was adopted from Technical Solution Option 2, but the power capacity was reduced to 25,000 kW. Therefore, the BESS size selected for the Stellenbosch supply point was 25,000 kW / 100,000 kWh.

4.4.1.3.2 Small (10 MWh) BESS Size

The “sizing based on curtailment approach” described above is aimed at achieving a significant reduction in / almost eliminating the 2022 level of load shedding, which moved between stages 1 and 6. The resultant BESS sizes to achieve this are very large. An additional sizing case was developed based on a smaller, nominal BESS size of 10 MWh at the Stellenbosch supply point. This additional case was only modelled for Stellenbosch supply point (as a proxy for all supply points) and was based on the Technical Solution Option 2A

approach i.e. combined with PV and operating in a fashion to reduce load shedding (i.e. not curtailment). If this option was selected for implementation the same approach of a reduced battery size could also be taken for the other three supply points as the same benefit would apply.

4.4.1.4 Model Outputs

Full Excel model results are included in **Annexure F**.

Results from a random selection of three days from Thursday, 17th November 2022 to Saturday, 19th November 2022, inclusive are shown below for Technical Solution Options 1A, 2A and 3A, for Stellenbosch supply point only. The results show how the model dispatches the energy generation and storage at hourly resolution throughout the three day period.

During the three-day period, the stage of load shedding was changed several times between stages 2, 3 and 4.

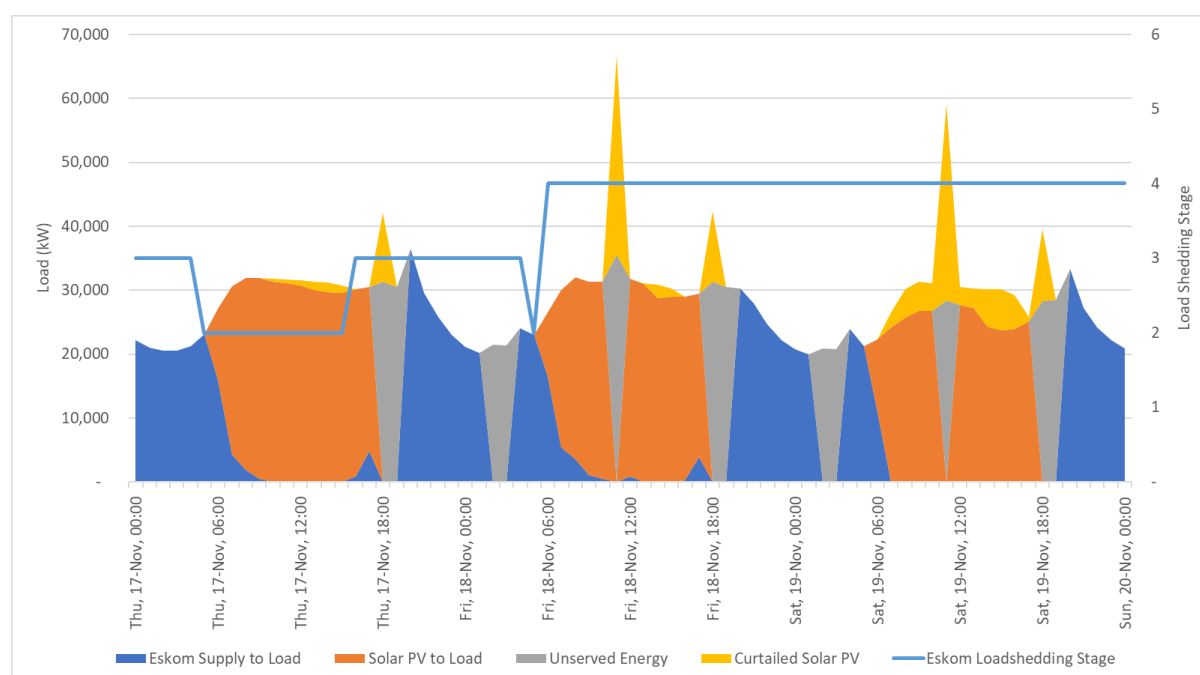


Figure 4-21 Technical Solution Option 1A – Stellenbosch Supply Point

In Technical Solution Option 1A results **Figure 4-21**, it can be observed that the solar PV plant contributes a large amount of energy during daytime hours (orange stack). Spikes in solar PV curtailment (yellow stack) are seen when load shedding occurs, and the solar PV plant must switch off i.e. all its generation is curtailed. Unserved energy (grey stack) can be seen at regular intervals of 2 hr and 4 hr duration, according to the load shedding schedule.

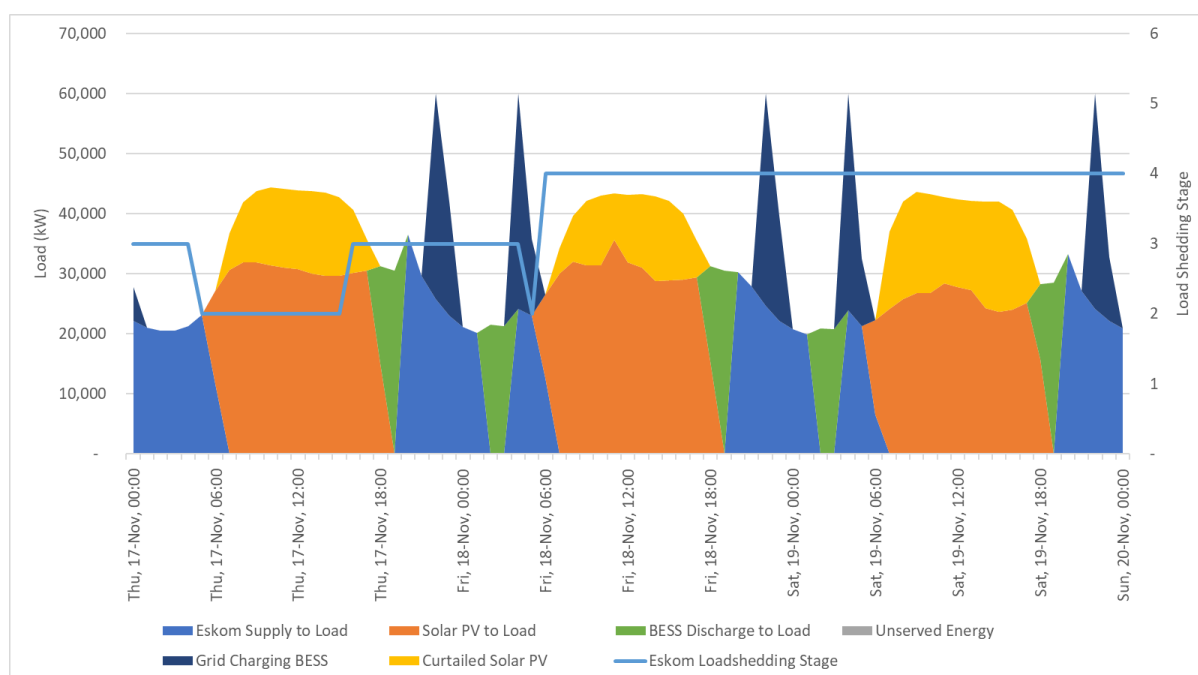


Figure 4-22 Technical Solution Option 2A – Stellenbosch Supply Point

In Technical Solution Option 2A results **Figure 4-22**, it can be observed that during the load shedding timeslots that occur during the day on Friday and Saturday (as were seen in **Figure 4-21**), the solar PV plant is able to fully supply the demand and there is no unserved energy or discharge from the BESS. Outside of these solar hours, the other load shedding timeslots (as were seen in **Figure 4-21**) are replaced with BESS discharge (green stack), and there is no unserved energy. The BESS can be seen recharging from the grid, during off-peak hours, after each discharge (dark blue stack). The demand from BESS charging, plus the demand from the Stellenbosch load never exceeds the NMD of the Stellenbosch supply point (60 MVA).

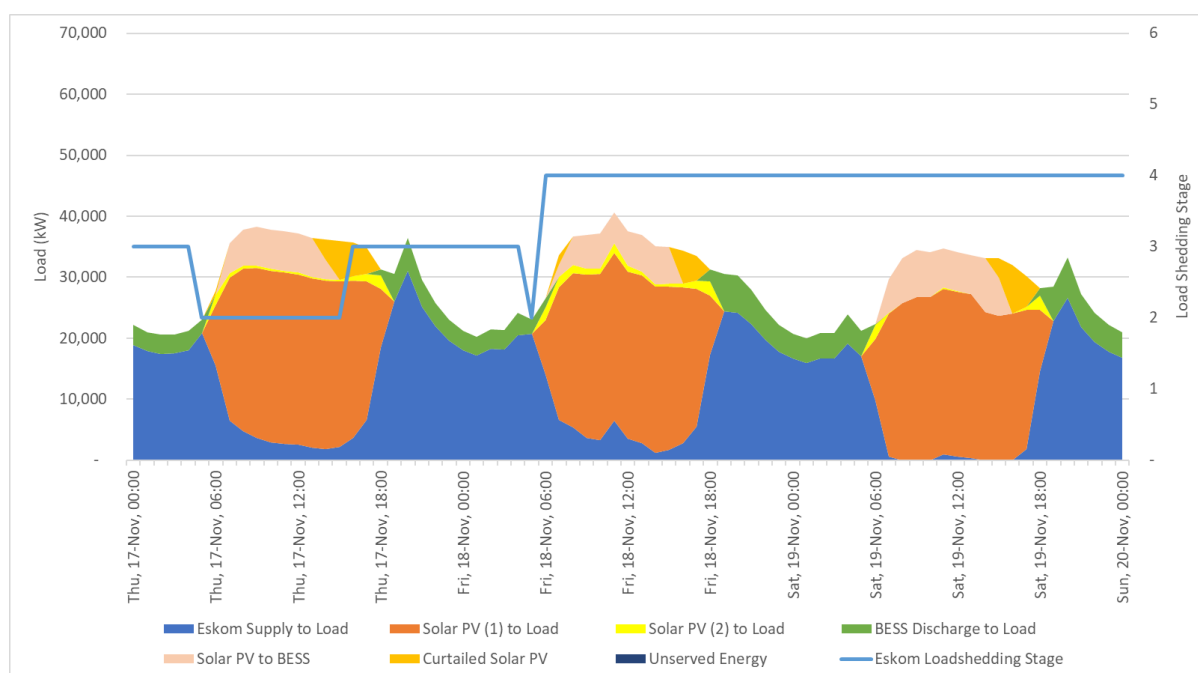


Figure 4-23 Technical Solution Option 3A – Stellenbosch Supply Point

In the Technical Solution Option 3A results **Figure 4-23**, the following is observed:

- “Solar PV (1)” (orange stack) which is the Eskom supply reduction solar PV plant, significantly reduces the demand from Eskom during each day. At some points on Saturday, the demand from Eskom goes to zero (blue stack disappears).
- “Solar PV (2)” (bright yellow stack) which is the dedicated load reduction solar PV plant, and the BESS (green stack) can be seen contributing to the load reduction during the day and night, respectively.
- The level of load reduction provided by the dedicated load reduction solar PV plant is much less during the day, since the normal demand profile seen by Eskom (after the Eskom supply reduction solar PV plant has contributed) is very small. During the night, the demand profile seen by Eskom is larger, and hence the BESS discharge to the load is also larger.
- The BESS can be seen recharging from solar PV for the first part of the day (pink stack) and once the BESS is full there is an excess of solar PV which is curtailed (yellow stack).

4.4.2 NETWORK CAPACITY AND STRENGTH (POWER SYSTEM STUDIES)

4.4.2.1 Introduction

Power system studies were conducted to identify potential network constraints / limits which may impact on the maximum size of new solar PV generation which can be connected to the Stellenbosch networks.

Network models were provided by the Municipality for the Stellenbosch, Franschhoek and Cloetesville areas. Since the Pniel area currently consists of three separate networks (which will only be combined once the new Eskom Pniel substation has been commissioned), it was not possible to conduct the studies for this area. No network models were provided for the Pniel networks.

The models provided were constructed in DigSilent PowerFactory software, and the TA Team used the same software to conduct the power system studies.

Average annual midday loads based on the 2023 load data were used as the basis for all substations. For the Stellenbosch area, the weekend midday load of 28.1MW was adopted as a worst-case scenario (weekday and weekend loads are similar at Franschhoek and Cloetesville). The average load profiles and the selected loads for modelling are indicated in the **Table 4-8** below.

Table 4-8 Midday Load Assumption based on 2023 Load Profile

Hour	Stellenbosch (kW)		Franschhoek (kW)		Cloetesville (kW)	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
1	24,191	23,399	4,058	4,245	4,509	4,556
2	21,920	21,508	3,677	3,845	3,946	3,974
3	22,179	21,552	3,786	3,787	4,022	3,907
4	21,487	20,544	3,622	3,669	3,954	3,786
5	22,642	21,492	3,988	3,940	4,541	4,046
6	24,273	21,831	4,719	4,140	6,596	4,496
7	29,217	23,351	5,650	4,781	8,008	5,467
8	33,700	25,317	5,933	5,494	7,686	6,770
9	37,362	29,066	6,766	6,545	7,990	7,936
10	37,091	29,176	6,839	6,860	8,023	8,785
11	36,400	29,156	6,826	6,940	7,984	9,115
12	35,267	28,115	6,605	6,637	7,798	9,036
13	35,440	28,232	6,727	6,593	8,123	8,867
14	34,077	26,719	6,472	6,250	7,896	8,425
15	34,009	25,519	6,631	6,171	8,051	8,449
16	33,610	25,305	6,635	5,988	8,339	8,214
17	33,380	27,327	6,896	6,174	8,993	8,339
18	32,973	28,270	7,116	6,326	9,981	8,703
19	34,808	29,982	7,740	6,776	10,875	9,176
20	33,799	30,213	7,455	6,755	11,094	9,411
21	34,133	30,714	7,141	6,706	10,247	9,078
22	30,470	27,986	5,934	5,681	8,159	7,444
23	28,358	26,474	5,299	5,070	6,478	6,176
24	24,866	23,421	4,272	4,247	4,932	4,859

Solar PV generator size was increased at each point to determine the ability of the network to accommodate new solar PV generation. The quantities in **Table 4-9** below were used as a

guide, based on the optimal sizes which were identified from the Energy Generation and Storage Dispatch Modelling.

Table 4-9 Target Generation Capacities at each Substation

	Stellenbosch	Franschhoek	Cloetesville
PV Generator Size (MW)	71	11	13

Where the network capacity allowed, the above values were increased to 19 MW per site (which avoids category A generation development that has more stringent environmental and technical / grid code requirements) except for the Stellenbosch Area Network where category A size plants (i.e. 20 MW and above) were also assessed.

The results for each area are provided below.

4.4.2.2 Stellenbosch Supply Point Network

Two approaches were taken to assess the Stellenbosch Supply Point Network:

- Assess the impact of connecting 19 MW (Category B) size PV generators at each substation
- Identify maximum size of PV generators (Category A) which could be connected at each substation

Load flow, short circuit, and Rapid Voltage Change (RVC) studies were undertaken to identify possible limits based on the above approaches / generator sizes.

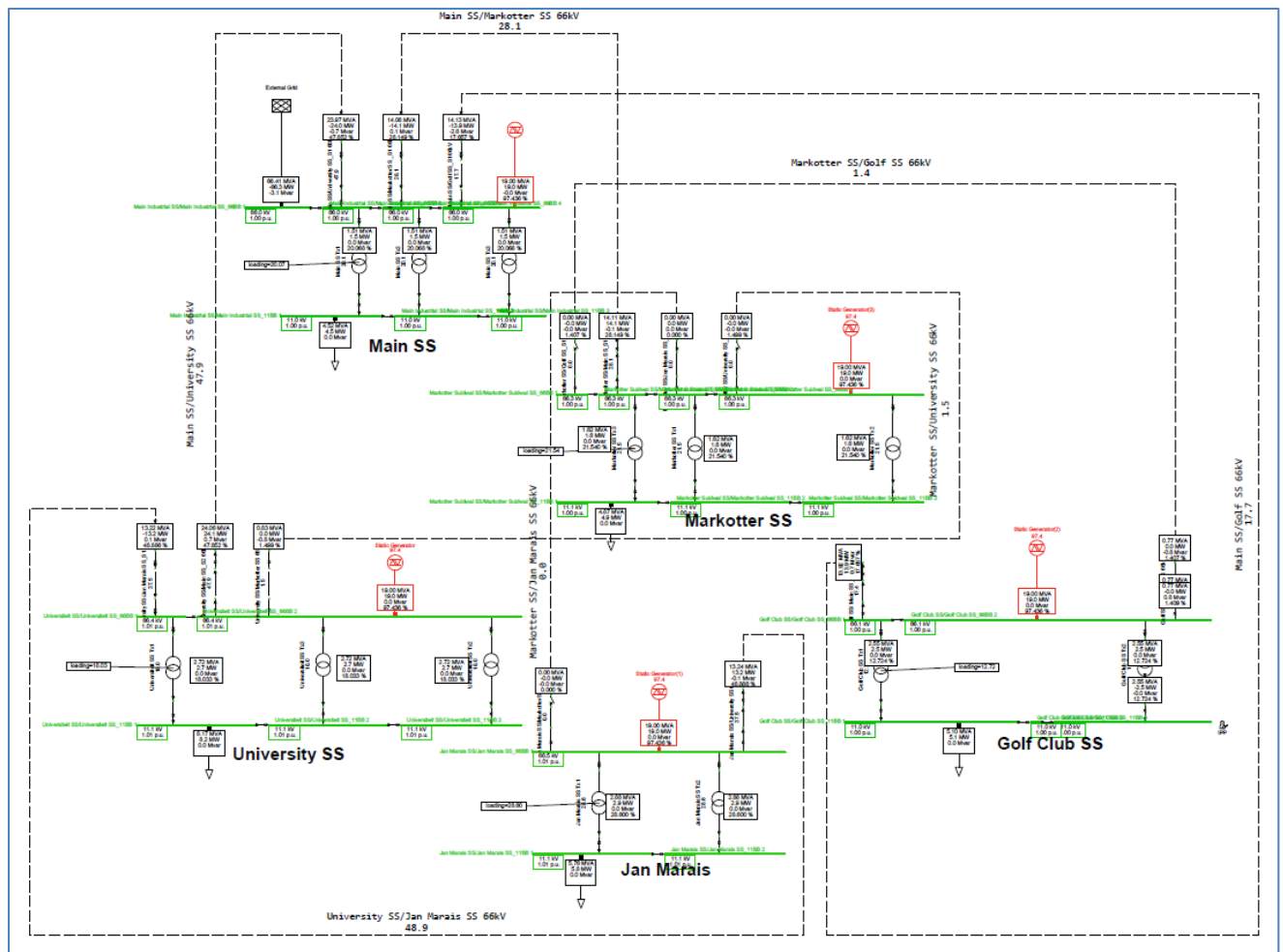


Figure 4-24 Stellenbosch Network Load Flow – 19 MW PV Connected at each substation

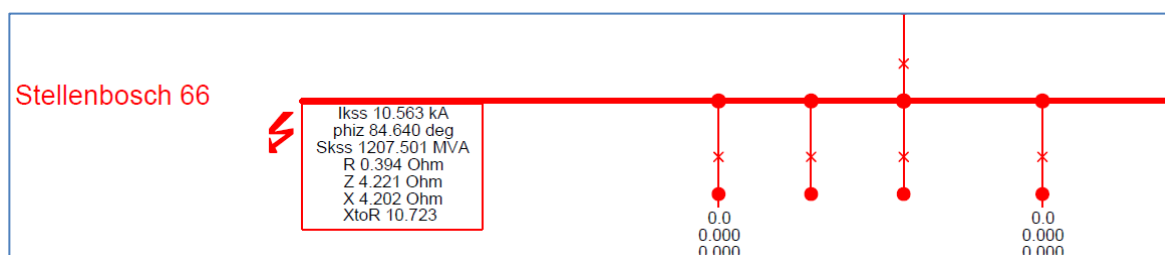


Figure 4-25 Stellenbosch Main Substation Short Circuit Current Study

RVC Performance in the Stellenbosch Network remains within the 3% limits as shown in the table below.

Table 4-10 Stellenbosch Network RVC – 19 MW Connected

Substation	RVC (at 19MW Worst Case Scenario)
Main SS	0.00%
Golf Club SS	0.34%
Jan Marais	0.73%
Markotter SS	0.68%
University SS	0.53%

Conclusion: all studied substations within Stellenbosch Local Municipality have a capacity to host the category B PV generating plant, which is 19 MW. The thermal and voltage performances are also not violated. This gives a total of 5 x 19 MW plants, which is 95 MW.

The Stellenbosch network can also connect a category A generation plant with the following size limits as outlined in **Table 4-11**. The table shows the maximum that could be connected at a single substation (i.e. not cumulative).

Table 4-11 Solar PV Limitation on the Stellenbosch network

Substation	Solar PV Limitation (MW)	Reason for Limit
Main SS	75	RVC
Golf Club SS	75	Main SS/Golf SS line overload
Jan Marais	30	University/Jan Marais line overload
Markotter SS	50	Main/Markotter overload
University SS	60	Main SS/University SS overload

Both approaches show that the limits are significantly higher than the 55 MWp solar PV generator size identified in the Energy Generation and Storage Dispatch Modelling.

4.4.2.1 Cloetesville Substation

The following figures show the key outcomes from the power system studies conducted for the Cloetesville Substation.

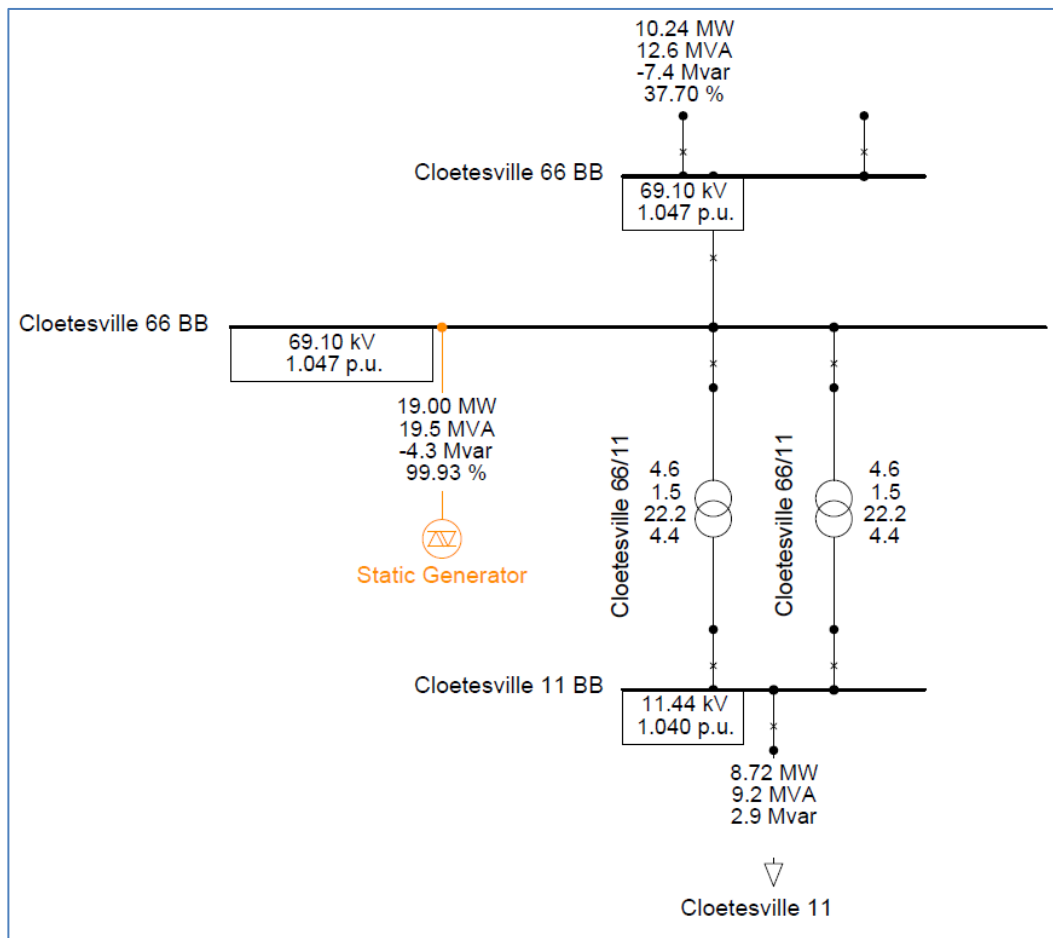


Figure 4-26 Cloetesville Substation Load Flow – 19 MW PV Connected

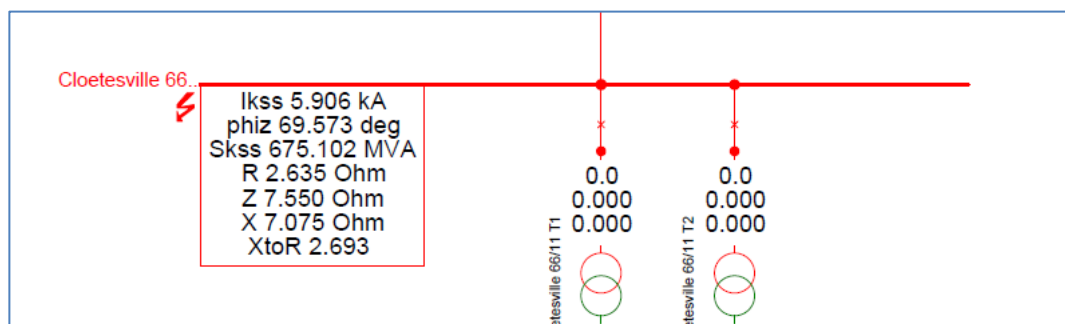


Figure 4-27 Cloetesville Short Circuit Current Study

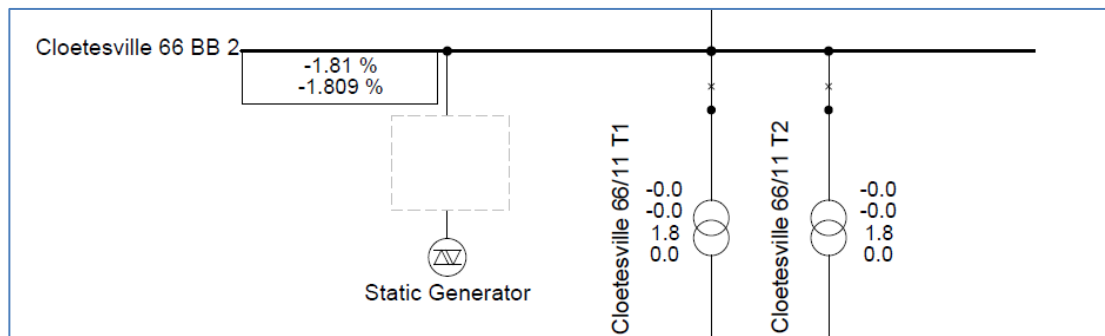


Figure 4-28 Cloetesville Rapid Voltage Change – 19 MW PV Connected

Conclusion: No limits or constraints were observed when connecting 19 MW of solar PV generation to the Cloetesville Substation. This is significantly higher than the 13 MWp solar PV generator size identified in the Energy Generation and Storage Dispatch Modelling.

4.4.2.2 Franschhoek Substation

The following figures show the key outcomes from the power system studies conducted for the Franschhoek Substation.

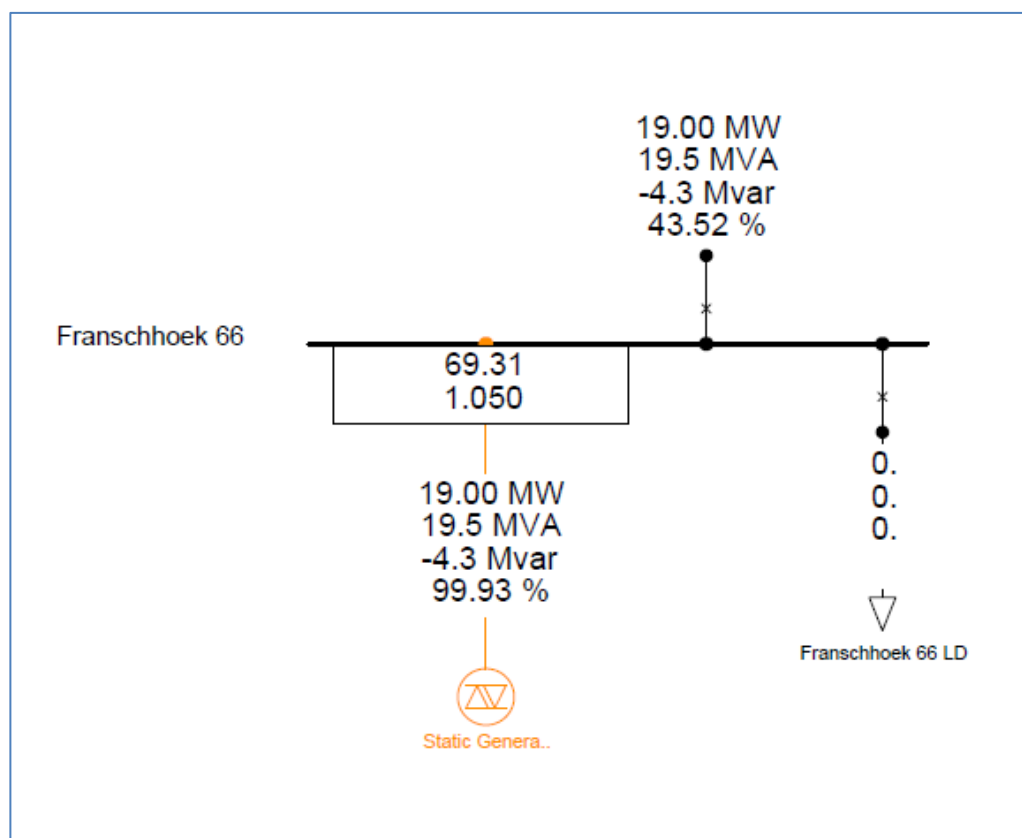


Figure 4-29 Franschhoek Load Flow – 19 MW PV Connected

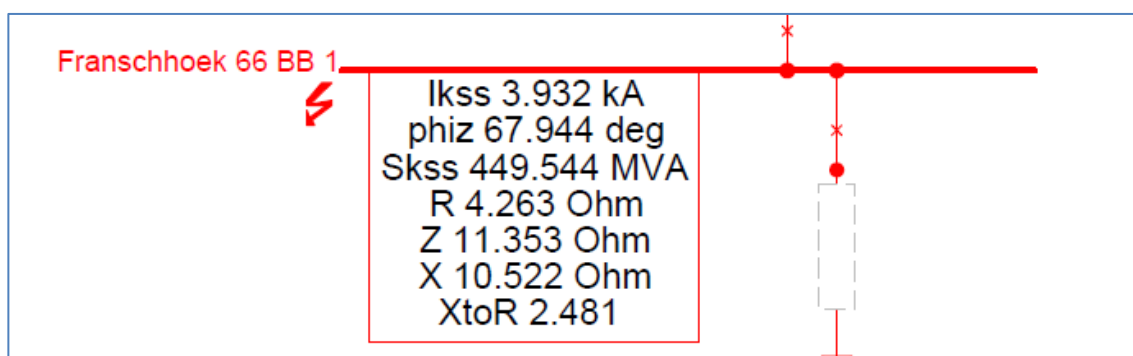


Figure 4-30 Franschhoek Short Circuit Current Study

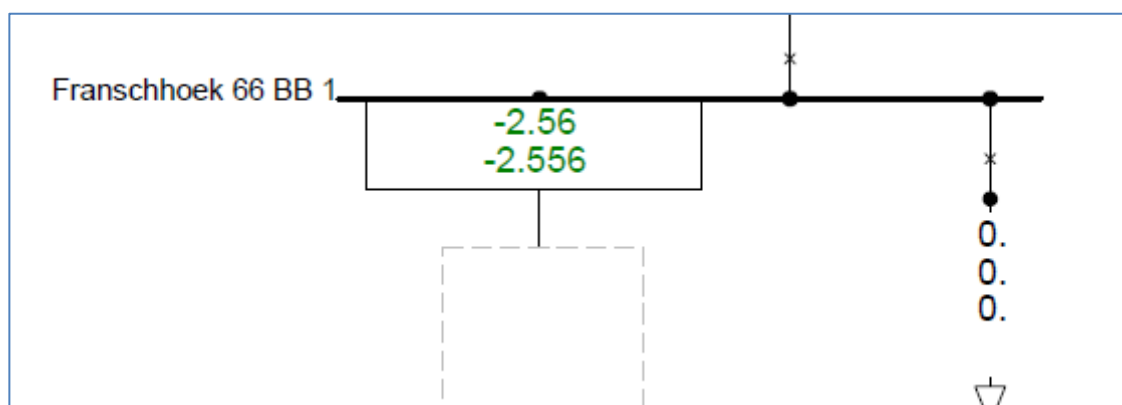


Figure 4-31 Franschhoek Rapid Voltage Change – 19 MW PV Connected

Conclusion: No limits or constraints were observed when connecting 19 MW of solar PV generation to the Franschhoek Substation. This is significantly higher than the 11 MWp solar PV generator size identified in the Energy Generation and Storage Dispatch Modelling.

4.4.2.3 Conclusion

The power system studies conducted show that the solar PV generator sizes identified in the Energy Generation and Storage Dispatch Modelling can all be accommodated at the Stellenbosch, Cloeteville and Franschhoek supply areas. As noted, no network models were provided for Pniel, and hence no conclusion can be made on Pniel at this stage.

4.4.3 RESULTS AND COMPARISON OF TECHNICAL SOLUTION OPTIONS

The modelling results for each technical option are shown in **Table 4-12** below. Each scenario for each technical option is shown, for each of the supply points.

A further 'no loadshedding' case was also modelled, to demonstrate the performance of the 10% curtailment size solar PV plant / solar PV plant + BESS system in future years, in an environment where loadshedding may have been eliminated.

Table 4-12 Technical Modelling results for each Technical Solution Option

Description		PV Curtailment	Stellenbosch					Cioetesville					Franschhoek					Pniel					TOTAL					
			Solar PV (MWp)	BESS (MW/MWh)	Hrs Loadshedding / Load Reduction	Unserviced Energy	Proportion of Grid Charging BESS (%)	Solar PV (MWp)	BESS (MW/MWh)	Hrs Loadshedding / Load Reduction	Unserviced Energy	Proportion of Grid Charging BESS (%)	Solar PV (MWp)	BESS (MW/MWh)	Hrs Loadshedding / Load Reduction	Unserviced Energy	Proportion of Grid Charging BESS (%)	Solar PV (MWp)	BESS (MW/MWh)	Hrs Loadshedding / Load Reduction	Unserviced Energy	Proportion of Grid Charging BESS (%)	Solar PV (MWp)	BESS (MW/MWh)	Hrs Loadshedding / Load Reduction	Unserviced Energy	Energy Delivered (GWh)	Reduction in Eskom supply (%)
1A	Solar PV only. One at each supply point. Load Shedding.	10%	34	-	670	7.8%	-	8.7	-	659	7.7%	-	7.9	-	670	7.8%	-	1.4	-	670	7.6%	-	52	-	667	7.8%	108	28%
1A NLS	Solar PV only. One at each supply point. No Load Shedding.	2%	34	-	0	0.0%	-	8.7	-	0	0.0%	-	7.9	-	0	0.0%	-	1.4	-	0	0.0%	-	52	-	0	0.0%	118	31%
1B	Solar PV only. One at Stellenbosch supplying all points. Load Shedding.	10%	55	-	814	7.8%	-	-	-	659	7.7%	-	-	-	670	7.8%	-	-	-	670	7.6%	-	55	-	703	7.8%	117	31%
2A	Solar PV + BESS. One at each supply point. Load Shedding.	10%	48	50 / 100	25	0.1%	77%	11.6	15 / 30	25	0.0%	78%	9.7	10 / 20	17	0.1%	78%	1.8	2 / 4	18	0.1%	81%	71	77 / 154	21	0.1%	147	39%
2A NLS	Solar PV + BESS. One at each supply point. No Load Shedding	10%	48	50 / 100	0	0.0%	58%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2A10S	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). Load Shedding.	10%	48	5 / 10	505	3.9%	67%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2A10S NLS	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). No Load Shedding.	10%	48	5 / 10	0	0.0%	56%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Shedding.	10%	71	55 / 110	23	0.2%	84%	-	-	24	0.3%	-	-	-	24	0.3%	-	-	-	24	0.3%	-	71	55 / 110	24	0.2%	164	43%
3A	Solar PV + BESS. One at each supply point. Load Curtailment.	10%	38	25 / 100	1,036	1.9%	-	13.1	7.5 / 30	1,241	2.2%	-	10.7	5 / 20	1,240	1.9%	-	1.8	1 / 4	734	1.4%	-	63	39 / 154	1,063	1.9%	130	34%
3B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Curtailment.	10%	67	38 / 150	862	1.6%	-	-	-	862	1.6%	-	-	-	862	1.6%	-	-	-	862	1.6%	-	67	38 / 150	862	1.6%	138	36%

4.4.3.1 Size Differences and Solar PV Curtailment

4.4.3.1.1 Option 1

For Option 1A, each load at each of the supply points was modelled separately and assumed an independent solar PV plant at each of the supply points. For Option 1B, only one plant at the Stellenbosch supply point was modelled. For a set constraint of 10% curtailment of the solar PV farm/s, the following sizes were obtained:

Table 4-13 Size Determination of the solar PV plant at each PoS for Option 1

Technical Solution Option	Description	PV Curtailment	Stellenbosch	Cloetesville	Franschhoek	Pniel	TOTAL				
			Solar PV (MWp)	Solar PV (MWp)	Solar PV (MWp)	Solar PV (MWp)	Solar PV (MWp)	Unserviced Energy	Energy Delivered (GWh)	Reduction in Eskom Supply	Solar PV Land Required Ha
Stellenbosch Municipality Load								381			
1A	Solar PV only. One at each supply point. Load Shedding.	10%	34	8.7	7.9	1.4	52	7.8%	108	28%	85
1A NLS	Solar PV only. One at each supply point. <u>No Load Shedding.</u>	2%	34	8.7	7.9	1.4	52	0%	118	31%	85
1B	Solar PV only. One at Stellenbosch supplying all points. Load Shedding.	10%	55				55	7.8%	117	31%	137

For the 10% curtailment base case, for the 1A scenario, the total MWp of the combined individual systems was 52.1 MWp, as compared to scenario 1B, with only one solar PV plant at the Stellenbosch supply point, which is 55.1 MWp. The difference can be attributed to the fact that for 1B, with only one solar PV plant located at Stellenbosch, the plant does not go offline during events of loadshedding at the other three supply points, hence the plant size is optimized for a larger size before it reaches the 10% curtailment cap, and it also supplies a larger quantum of energy. The 1A solar PV plants delivered 108 GWh to their respective supply points, versus the single solar PV plant at Stellenbosch in scenario 1B, which supplied a total of 117 GWh for the year.

An additional scenario (1A NLS) was run to understand the plant performance if no load shedding was experienced during the year. The size of solar PV plant used was that of the 1A solution, to be able to do a comparison with 1A. If no load shedding is experienced during the

year, 2% of plant curtailment is experienced at the solar PV plant, meaning that the plant can deliver a higher quantum of electricity, with the reduced level of load shedding. There is also a higher reduction in the Eskom supply (31%) when compared to 1A (28%), although this was only calculated for the Stellenbosch intake point.

The results suggest that in an environment where loadshedding is prevalent, and where a solar only plant is to be considered, having one large solar PV plant at one supply point will have a positive impact compared to four smaller, independent plants at each of the supply points, since the solar PV plants are modelled as being offline during events of loadshedding.

4.4.3.1.2 Options 2 and 3

Options 2 and 3 are the security of supply options and therefore include BESS. For Option 2A and 3A, each load at each of the supply points was modelled separately and assumed an independent solar PV plant and BESS at each of the supply points. For Option 2B and 3B, only one plant and one BESS at the Stellenbosch supply point was modelled. For a set constraint of 10% curtailment of the solar PV farm/s, the following sizes were observed as presented in **Table 4-14**.

Table 4-14 Size Determination of the solar PV plant at each PoS for Options 2 and 3

Description		PV Curtailment	Stellenbosch		Cloetesville		Franschhoek		Pniel		TOTAL	
			Solar PV (MWp)	BESS (MW/MWh)	Solar PV (MWp)	BESS (MW/MWh)	Solar PV (MWp)	BESS (MW/MWh)	Solar PV (MWp)	BESS (MW/MWh)	Solar PV (MWp)	BESS (MW/MWh)
2A	Solar PV + BESS. One at each supply point. Load Shedding.	10%	48	50 / 100	11.6	15 / 30	9.7	10 / 20	1.8	2 / 4	71	77 / 154
2A NLS	Solar PV + BESS. One at each supply point. No Load Shedding	10%	48	50 / 100	-	-	-	-	-	-	-	-
2A10S	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). Load Shedding.	10%	48	5 / 10	-	-	-	-	-	-	-	-
2A10S NLS	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). No Load Shedding.	10%	48	5 / 10	-	-	-	-	-	-	-	-
2B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Shedding.	10%	71	55 / 110	-	-	-	-	-	-	71	55 / 110
3A	Solar PV + BESS. One at each supply point. Load Curtailment.	10%	38	25 / 100	13.1	7.5 / 30	10.7	5 / 20	1.8	1 / 4	63	39 / 154
3B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Curtailment.	10%	67	38 / 150	-	-	-	-	-	-	67	38 / 150

For Option 2A, the total capacity (MWp) of the individual systems is 70.7 MWp, as compared to Option 2B at 71.3 MWp which only has one solar PV plant at the Stellenbosch supply point. These plants are in general larger than in Option 1, because they are modelled as being online

during events of load shedding, and are also used to charge the BESS, and hence can accommodate a larger in size before the 10% curtailment cap is reached. The BESS sizing for Options 2A and 2B show that a much larger BESS would be required if the plants are independent (77 MW/154 MWh), compared to if there was only one BESS at the Stellenbosch supply point (55 MW/110 MWh).

Note that in the Option 2 load shedding scenarios, the BESS is also charging from the grid during off-peak times. The modelling results show that the BESS is only using a small amount of energy from solar PV over the course of a year. Options 2A and 2B source 77% and 84% of the required BESS charging quantity from off-peak grid energy over the course of the year. This reduces in the no load shedding (NLS) options, where only about half of the energy required to charge the BESS is sourced from the grid. For Option 2, production from the solar PV plant is therefore mostly being used for reducing Eskom demand, and not for security of supply. This shows that the link between the solar PV plant and the function of the BESS for security of supply is small.

For Option 3A, the total MWp of the individual systems is 63.05 MWp, as compared to Option 3B, with only one solar PV plant at the Stellenbosch supply point, which is 66.63 MWp. In Option 3, as explained previously, the solar PV capacity consists of two separate components: 1. The Eskom supply reduction solar PV plants which are used to reduce the normal Eskom demand, 2. The solar PV plants being used solely for load curtailment and charging the BESS. The aggregate of both solar PV plant capacities is shown in **Table 4-14** above. The BESS sizing for Options 3A and 3B show minimal difference between the two options; 38.5 MW/154 MWh for 3A, and 37.5 MW/150 MWh for 3B.

Option 3A (63.1 MWp) and Option 3B (66.6 MWp) have smaller solar PV plants when compared to Option 2, for the same 10% level of curtailment. This is largely due to the solar PV plant components which are dedicated to load curtailment and BESS charging, since these plants reduce / curtail their entire output when there is no load shedding.

The solar PV size for Option 2A10S (smaller 10 MWh BESS) is similar to Option 2A (large BESS), with a similar level of solar curtailment for this size. The BESS size was pre-determined at 5 MW / 10 MWh.

Additional scenarios were run for Options 2A and 2A10S to understand the performance from a plant of these sizes if no load shedding was experienced during the year. If no load shedding is experienced during the year, the curtailment from Options 2A NLS and 2A 10S NLS are slightly lower (less than 1% difference), meaning that even though no load shedding is experienced, the plants will still produce and deliver a similar quantum of electricity.

4.4.3.2 Unserved Energy

For the 2022 reference year, the total amount of unserved energy (as a percentage of energy demanded by customers) due to loadshedding was 7.8% across the entire Municipality. This was due to approximately 4,979 hours of loadshedding throughout the course of that year.

Option 1 does not have an impact on loadshedding and does not reduce the percentage of unserved energy as the plants are offline during events of loadshedding.

In Option 2, which is the load shedding reduction scenarios, the solar PV plants and BESS reduce the quantum of unserved energy. Option 2A reduces the unserved energy to 0.09% and reduces the hours of loadshedding to 21 hours for the year (average across all four supply points). For Option 2B, the combined solar PV and BESS result in 0.23% of unserved energy for the year, which equates to 24 hours of loadshedding on average across the four supply points for the year. For Option 2A10S, the solar PV and BESS at Stellenbosch supply point result in 3.9% of unserved energy for the year, which equates to 505 hours of load shedding at the Stellenbosch Supply point.

Note that loadshedding is not completely eliminated in any of the modelled scenarios. However, larger solar PV and larger BESS capacities than those modelled will result in a higher capex cost with only a marginal additional reduction in unserved energy.

For Option 3, which is the load curtailment scenarios, the solar PV and BESS plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.91% and 1.57% of unserved energy for Options 3A and 3B, respectively. Even though the quantum of unserved energy is significantly reduced, the remaining unserved energy means that the Municipality will need to rely on other load reduction interventions for 1,036 hours and 862 hours of the year to meet load curtailment requirements for Options 3A and 3B, respectively.

Comparing the hours of load shedding / unserved energy between Options 2 and 3 is not recommended. The Option 2 scenarios are working to provide the entire municipal load during discrete, scheduled load shedding timeslots while the Option 3 scenarios are working to provide a constant reduction over an extended period to meet load curtailment requirements. The Municipality should consider looking at this result from the perspective of what unserved energy means in each case. For example, in Option 2A, the Municipality will have to contend with 21 hours of complete loadshedding (of the entire load) in the year (based on 2022 levels of loadshedding). However, for Option 3A, the Municipality will be required to use other interventions to partially reduce load (much smaller quantum) for 1,036 hours in the year. Both mechanisms are different, and both have pros and cons and need to be considered with other factors such as cost, and ease or difficulty in applying each option. If the Municipality has other load curtailment initiatives available, it could plausibly meet its curtailment requirements together with the energy that will be provided by the solar PV and BESS for an overall lowest cost / lowest economic impact.

4.4.3.3 Renewable Energy Penetration / Reduction in Eskom Supply

The solar PV only Options 1A and 1B, offer less Eskom supply reduction than the solar PV and BESS Options. This is because with Option 1, the plants are modelled as being offline during events of load shedding. For the security of supply scenarios, the Option 2 load shedding scenarios offer a higher Eskom supply reduction than the Option 3 load curtailment scenarios. This is due to the larger solar PV plant sizes that are achieved for the Option 2 scenarios before the 10% cap on curtailment is reached. For all system sizes modelled, the reduction in Eskom supply is close to or exceeding 30%.

Table 4-15 Renewable Energy Penetration

Description		PV Curtailment	TOTAL			
			Solar PV (MWp)	BESS (MW/MWh)	Energy Delivered (GWh)	Reduction in Eskom supply (%)
1A	Solar PV only. One at each supply point. Load Shedding.	10%	52	-	108	28%
1A NLS	Solar PV only. One at each supply point. No Load Shedding.	2%	52	-	118	31%
1B	Solar PV only. One at Stellenbosch supplying all points. Load Shedding.	10%	55	-	117	31%
2A	Solar PV + BESS. One at each supply point. Load Shedding.	10%	71	77 / 154	147	39%
2A NLS	Solar PV + BESS. One at each supply point. No Load Shedding	10%	48	50 / 100	113	44%
2A10S	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). Load Shedding.	10%	48	5 / 10	100	39%
2A10S NLS	Solar PV + BESS. One at each supply point (only Stellenbosch supply point modelled). No Load Shedding.	10%	48	5 / 10	101	39%
2B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Shedding.	10%	71	55 / 110	164	43%
3A	Solar PV + BESS. One at each supply point. Load Curtailment.	10%	63	39 / 154	130	34%
3B	Solar PV + BESS. One at Stellenbosch supplying all points. Load Curtailment.	10%	67	38 / 150	138	36%

Notes: Totals for 2A NLS, 2A10S, 2A10S NLS are for Stellenbosch supply point only.

4.4.3.4 BESS Sizing Curve

The results of the technical study on Options 2 and 3 can be summarised in **Figure 4-32**. The graph shows the effect on hours of load shedding and the percentage of unserved energy for a fixed size of solar PV system combined with different sizes of BESS (graph only shown for the Stellenbosch supply point under scenarios 2A and 3A).

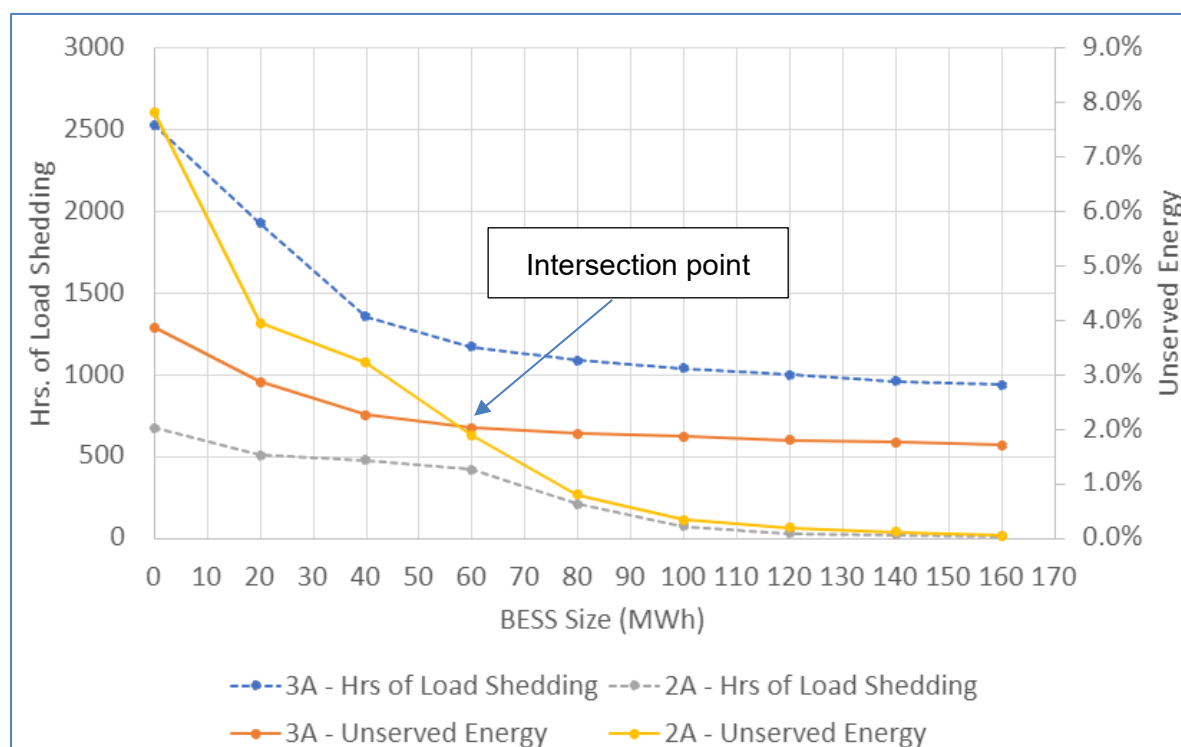


Figure 4-32 Stellenbosch 10% PV Curtailment: BESS Size vs Performance for 2A & 3A

The main conclusion from this comparison is that for a BESS size of less than 60 MWh, there is a lower amount of unserved energy if the BESS is used for load curtailment (Option 3A) as opposed to being used for load shedding (Option 2A). However, for a BESS size beyond 40 MWh, the reduction achieved in unserved energy with Option 3A is small and essentially never reduces below 1.5%. It should also be noted that with no BESS (0 MWh in the figure above), Option 3A still achieves a noticeable reduction in unserved energy, due to the contribution of the solar PV systems.

Above 60 MWh BESS size, using the BESS for load shedding (Option 2A) achieves a greater reduction in unserved energy than using the BESS for load curtailment (Option 3A), as seen by the “intersection point” noted on the figure above. To reduce unserved energy below 1.5% to almost 0%, can be more easily achieved with a larger BESS operating in a load shedding manner (Option 2A). However, for BESS sizes above 80 MWh the marginal reduction in unserved energy significantly diminishes, with negligible benefit observed between 100 MWh and 160 MWh BESS sizes.

In summary, for a smaller size of BESS such as the 2A10S Option (which is expected to be more economical), operating the BESS (and accompanying PV systems) in a load curtailment fashion would provide an even larger impact on unserved energy than operating it in a load shedding reduction fashion.

4.4.3.5 Sensitivity Analysis

As discussed in **Section 4.2.5**, the load profile and load shedding profile adopted as the base case for modelling was 2022. As discussed in **Sections 4.2.3** and **4.2.4**, respectively, the load (with load shedding removed) was lower in 2023 compared to 2022 (suspected to be a result of new customer embedded solar PV installations), and load shedding was higher in 2023 compared to 2022.

To understand the impact of these differences on the Energy Generation and Storage Dispatch modelling, two sensitivity cases were considered:

1. Retaining the same system sizes, how do the systems perform based on the 2023 load and 2023 level of load shedding?
2. Retaining the same system sizes, how do the systems perform based on the 2023 load and 2022 level of load shedding?

A third sensitivity was also developed, regarding the assumption that the solar PV system in Technical Solution Options 1 and 2 would need to be switched off during load shedding if a BESS was not installed (in the case of Option 1) or did not have any charge (in the case of Option 2). In a news article released on 15 May 2024¹², regarding the Rural Free State (RFS) / Frankfurt case against Eskom on a similar topic, it was stated that “RFS said following meetings with Eskom, the utility accepted that load-shedding was not required when Frankfurt was not receiving any power from Eskom at the time.” Without having access to the details around this development, it was considered prudent to conduct a sensitivity case which assumes that the solar PV system in Technical Solution Options 1 and 2 could remain online (even without a BESS or if the BESS was empty) during load shedding if the solar PV production was greater than the load consumption. Important to note, that our assumption in this scenario is that when the solar PV production is less than the load, then the solar PV system again switches off. It may be possible, upon confirmation from Eskom and the Municipality’s ability to accurately self-load shed, to step down the load when solar PV production reduces below the full load demand – this would allow more of the solar PV production to be utilised by the load.

¹²https://mybroadband.co.za/news/energy/536815-big-win-for-free-state-town-that-battled-eskom-over-solar-power-plant.html?fbclid=IwZXh0bgNhZW0CMTEAAR3lppy0jBREi-H4fRE-CDDezh_WT2STYLT_lq6aMdxw9JktrFIWf4BCD9IA_aem_AQ0YS3PcO7PBpXt-7_an3HAszumua23mL0OuKOF78PDbeP_G0qGrBBofv-M6Q3kTh9_CnzE5uyxKj28Cklpfn6yN

The models for Technical Solution Options 1A, 2A and 3A, for Stellenbosch supply point only, were re-run based on the three sensitivity cases described above with the results presented in **Table 4-16** below.

The following conclusions can be made from the results of the sensitivity cases:

- Regarding the 2023 load profile combined with 2023 load shedding, as expected, the solar PV system in Technical Solution Option 1A experiences an increase in curtailment from 10% to 19% due to the assumption that the PV system must be offline during load shedding. However, the 2023 load profile combined with 2022 load shedding (which is, thus far, closer to the level of load shedding in 2024) results in a solar PV curtailment of only 11%, suggesting that the impact of the lower load in 2023 (compared to 2022) is small based on the currently proposed solar PV system size.
- There is a moderate increase (from 10% to 13%) in solar PV curtailment due to the 2023 load (regardless of load shedding profile) for Technical Solution Option 2A. However, considering that the most economical size of PV system is typically between 10% and 15%, and noting that the load is expected to increase over time (in with a possible further increase in customer embedded generation), the currently proposed solar PV system size for this option still appears suitable.
- Regarding the solar PV system remaining online during load shedding (without a BESS or with an empty BESS) when PV production is greater than the load, based on the current system sizes, there are very few times when the PV system could remain online due to this change in assumption, and the results from this sensitivity case are essentially the same as the results from the base case.
- Overall, based on the results from the sensitivity cases, the current system sizes still appear suitable based on the current base case assumptions.

Table 4-16 Sensitivity Results

Description		Solar PV (MWp)	BESS (MW/MWh)	Base Case (2022 Load Profile, 2022 Load Shedding)				Sensitivity 1 (2023 Load Profile, 2023 Load Shedding)				Sensitivity 2 (2023 Load Profile, 2023 Load Shedding)				Sensitivity 3 (2022 Load Profile, 2022 Load Shedding, PV on when prod. > load)			
				PV Curtailment (%)	Residual Loadshedding / Reduction (hrs)	Unserved Energy (%)	Reduction in Eskom supply (%)	PV Curtailment (%)	Residual Loadshedding / Reduction (hrs)	Unserved Energy (%)	Reduction in Eskom supply (%)	PV Curtailment (%)	Residual Loadshedding / Reduction (hrs)	Unserved Energy (%)	Reduction in Eskom supply (%)	PV Curtailment (%)	Residual Loadshedding / Reduction (hrs)	Unserved Energy (%)	Reduction in Eskom supply (%)
1A	Solar PV only. One at each supply point. Load Shedding.	34	0	10%	672	7.8%	27%	19%	1,464	16.7%	25%	11%	672	7.4%	27%	10%	657	7.6%	27%
2A	Solar PV + BESS. One at each supply point. Load Shedding.	48	50 / 100	10%	25	0.2%	41%	13%	107	0.9%	44%	13%	20	0.2%	40%	10%	25	0.2%	41%
3A	Solar PV + BESS. One at each supply point. Load Curtailment.	38	25 / 100	10%	1,036	1.9%	30%	4%	3,155	6.5%	32%	10%	993	1.8%	30%	N/A			

4.5 OTHER TECHNICAL CONSIDERATIONS

4.5.1 TECHNOLOGY RISK

Solar PV technologies for power generation are proven and well established in the international power generation industry, including in South Africa. Utility Scale Lithium Ion BESS has gained traction in many markets in recent years and are also now appearing in the South African electricity supply industry, including procurement on large scales by the National Government through the DMRE. The technology is proven and can be financed in the South African market.

The main components of solar PV plants are modules, trackers, and inverters. BESS systems are made up of battery packs, storage containers and associated equipment and management systems, and inverters for power conversion.

Module trends in South Africa show a movement towards Bifacial monocrystalline modules over mono-facial polycrystalline due to the small cost difference relative to energy gain between bifacial and mono-facial modules. Monocrystalline modules are known to be more efficient than polycrystalline modules. Many modules are available on the market and many manufacturers with Tier 1 modules with a proven track record have been used in South Africa. The PV industry is subject to rapid advancements in module efficiency and higher-powered PV modules may likely be available and preferred at the detailed design stage.

A typical module, for example the Astronergy 625 has a nominal power output of 625 Wp, with dimensions (L x W x H) of 2.47 m x 1.13 m x 0.03 m.

Mounting structures used in utility scale solar PV plants are typically either fixed tilt or single axis tracking systems. For this size of plant, a single-axis tracking mounting structure will likely be selected over fixed-tilt, due to the higher energy gains from the tracking solution. Tracking plants are typical in industry as the higher cost is outweighed by the additional gain in energy production.

Both string inverters and central inverters are used in South Africa for utility scale solar PV plant. String inverters will be more in number than a central inverter but are easier in terms of maintenance and have a comparatively low energy loss in the event of failures. Many options from companies with a well-known presence in the industry are available.

In conclusion, the proposed technologies for both solar PV and BESS are well established and mature enough to be able to be financed by commercial South African banks. Many such plants have been successfully constructed in South Africa by private developers.

4.5.2 REQUIRED SPACE / LAND

For an envisioned 50 to 60 MW solar PV plant, it is estimated that a land area of approximately 125 to 150 hectares will be required, or 2.5 hectares per 1 MWp of installed PV capacity. This is conservative, but appropriate for an early-stage project with no identified land options and therefore no environmental screening results. Further refinement is usually conducted during concept stage design and simulation once the results of basic screening have been conducted. A typical 50 MW solar PV plant is shown in **Figure 4-33**. BESS space requirements are minimal, and at a conservative estimate of 12 kWh/m² a 50 MWh BESS would require less than half a hectare of land. A typical land usage for a 50 MW solar PV plant is shown in **Figure 4-33**, with typical breakdown of the land usage detailed in **Table 4-17** below.



Figure 4-33 Typical Footprint of a 50MW Solar PV plant¹³

¹³ Green Building Africa, 50MW Kita Solar PV Plant

Table 4-17 Typical solar PV Plant area requirements

Solar PV Section	% of total area
Solar PV modules	80%
Inverter system	2%
Roads and access paths (including fencing and clearance)	3%
Balance of plant	10%
Laydown area	5%

Proximity to existing infrastructure, located within 15 km of the Eskom supply point and minimal interference with both current and future site infrastructure is preferred. In the Stellenbosch municipal area, it is expected that land would be difficult to source for such a project, as land availability is already severely constrained. A solar PV plant should ideally be located as close to its connection point as possible, to reduce the complexity of the transmission network required especially to reduce the required wayleaves and permissions.

Land should ideally feature a gentle topography with no gradient changes greater than 5%. Furthermore, the chosen location must be agreeable to all stakeholders, respecting the social 'license' already established with surrounding communities.

Land ownership will likely be private land, although Municipal sites were screened for this study. It is unclear what engagement private developers would have had with surrounding landowners. A high-level survey of Municipal land was conducted to determine if any viable options would be available and **Figure 4-34** depicts the graphical view of identified Municipal land relative to Eskom supply points for solar PV development.

The screening was conducted by using 15 km radius circles around each Eskom supply point (assumed for Pniel as substation not yet constructed), these are the green circles in the **Figure 4-34** below. The Municipality's Spatial Planning department conducted the study to identify land parcels and four such options were found: S1, S2, S3 and S4 as described below.

The following four land parcels were identified:

- Site 1 – Franschhoek Site, 6 hectares (approx. 3-5MW of capacity)
- Site 2 – Wemmershoek Site, 10 hectares (approx. 5-8MW of capacity)
- Site 3 – Klapmuts Site, 14 hectares (approx. 9-12MW of capacity)
- Site 4 – Northern Site, 55 hectares of capacity (approx. 30-35MW of capacity)

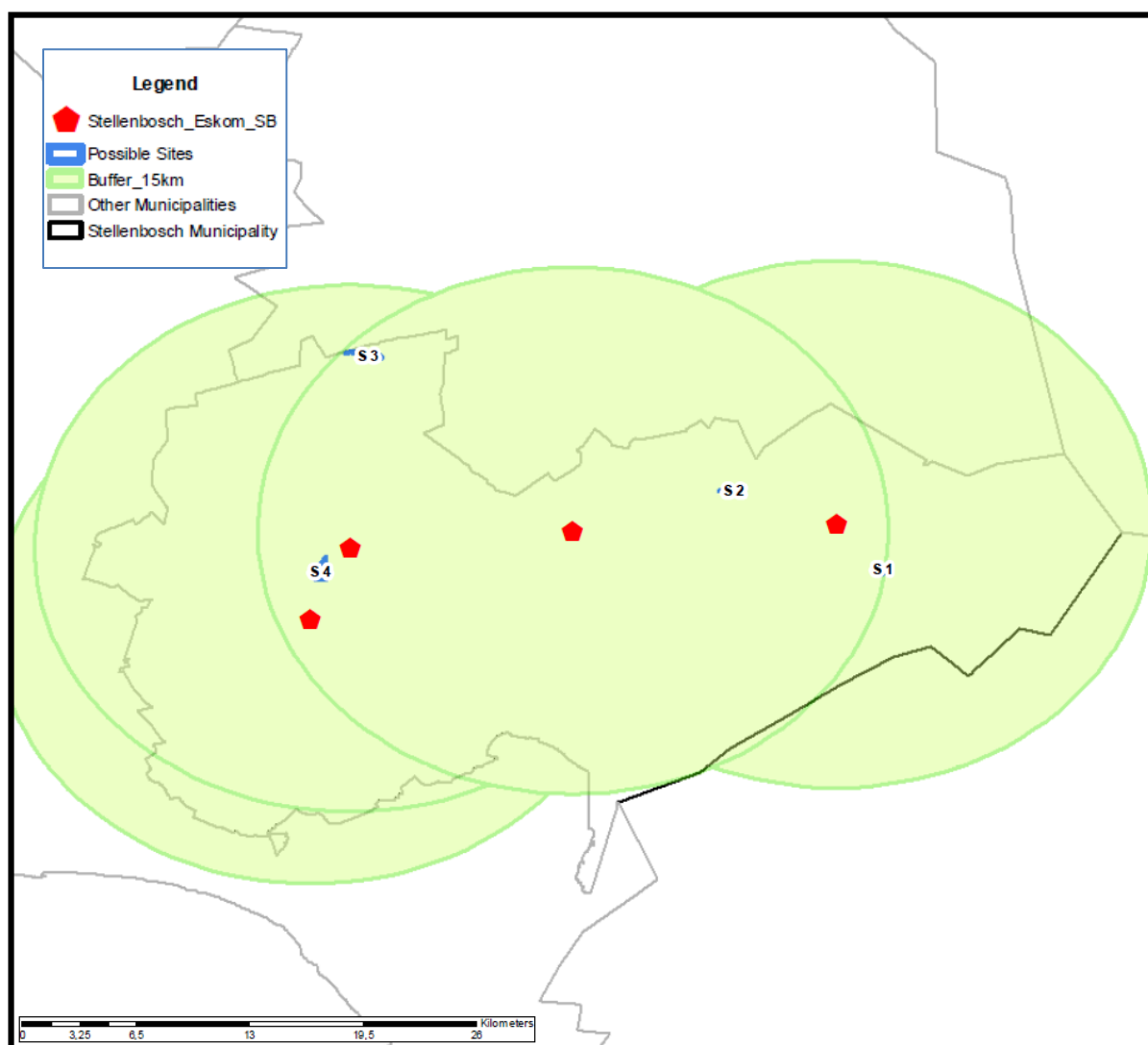


Figure 4-34 Graphical view of identified Municipal land relative to Eskom supply points

Most of the land parcels identified are small, with S4 being able to support a plant of up to 35 MW. Basic screening on all four sites show that they could plausibly be used for solar PV development, but their small sizes mean they are likely suboptimal. S4 could theoretically be used for a solar PV plant connected to Stellenbosch intake point or Cloetesville. Further consideration should be given to the inclusion of Municipal land during the RFP planning stage, in consultation with Municipality stakeholders.

It is envisaged that any future site used would need to undergo basic screening before being confirmed as suitable. For example, environmental screening is used to identify substantive environmental and licensing risks related to the construction the proposed solar PV plants. Sites are usually screened using desktop tools like the Online Screening Tool of the Department of Forestry, Fisheries and Environment (DFFE), which will provide an initial high-level indication of potential sensitivity. If significant environmental risks are identified, mitigation measures are identified to reduce the risks to acceptable levels or to eliminate the

risks. Potential environmental “listed activities” (if any) that could require an Environmental Authorisation (EA) under the Environmental Impact Assessment regulations.

Note: this screening does not guarantee the absence of environmental risks for sites considered to have low sensitivity. Rather, the objective of screening is to confirm the comparative risk per site so that an informed decision can be taken as to which site is most suitable to develop from an environmental perspective. If private developers have already screened sites within the Stellenbosch municipality, these should take preference over unscreened proposed sites, unless it can be proven that development on those sites will have low environmental risks.

4.5.3 ELECTRICAL INTERCONNECTION CONSIDERATIONS

The ideal location for a solar PV plant and BESS plant would be close to the supply intake points with Eskom, as this is usually the point on the network with the greatest system strength. The solar PV plant would ideally be connected on the Municipality side of the network to avoid any Eskom wheeling charges.

Power system studies have been conducted on the main network points within the Municipality’s network and have been assessed for available capacity to integrate solar PV plants. Some developers may have conducted their own studies or may have secured available land where it may be feasible to connect to other points on the network. Where IPPs propose other points of connection, relevant studies would need to be done by the Municipality (or a service provider) to assess those proposed connection points and their viability. Typical connection infrastructure requirements for example pylons, poles, wires, switching stations, substations, switchgear, and protection equipment would need to be assessed based on a project-by-project basis.

It is unclear how many developers might have conducted advanced feasibility studies on other points of the network, and the extent of engagement with local landowners in terms of permissions for wayleaves. These will also have to be assessed on a project-by-project basis during the procurement process.

4.5.4 CONTROL CONSIDERATIONS

The plant (solar PV and/or BESS) in each technical solution option will have a control system which will need to interface with the Municipality (except, perhaps for Option 1C which is an off-site wheeling solar PV plant). The control system will need to manage the following types of functions, some of which will require some form of input, instruction, or information from the Municipality:

- Power generation / output setpoint – This will likely require an input reading from the Municipality’s electricity meters to either prevent feedback of electricity into the Eskom grid, or to provide the correct level of feedback into the Eskom grid, depending on the option. For the PV only options (Options 1A and 1B), the solar PV system/s would need to shut down during load shedding – this may require either an instruction from the Municipality control room, from Eskom, or a signal from the Municipality’s network e.g. no load.
- Charging the BESS – Depending on the option, the BESS may be allowed to charge from solar PV and/or the grid. The control system will need to manage the charging operations, including deciding which power source it charges from and ensuring that grid charging stays within certain limits e.g. only during off-peak times, and without exceeding the NMD or “normal demand profile”.
- State of Charge and discharging the BESS – In any of the BESS options (2A, 2B, 3A, 3B), discharging the BESS will require a careful balance of solar PV generation, BESS discharge, and Municipal load (in some cases, the load from multiple supply points). Either the IPP’s control system or the Municipality’s control centre would need to process the required information (such as available solar PV generation, available BESS charge, and required load) to decide which / how much generation to dispatch at any point in time. When the BESS is close to empty / fully discharged, and load shedding is likely to continue beyond this time, the Municipality would need to put in place other load shedding / load reduction measures to ensure the load shedding / load reduction is seamlessly maintained. A breach in the balance of generation and load during a load shedding period may lead to Eskom considering the Municipality to be in violation of NRS048-9, potentially requiring the Municipality to shut down the solar PV and BESS plant and return control of load shedding to Eskom (like the recent events published in the news regarding City of Ekurhuleni).
- Alternative BESS applications – If load shedding is eliminated or not experienced for long periods of time, the Municipality may decide to reconfigure the operation of the BESS to provide a difference function, for example, arbitrage i.e. charging from excess solar or off-peak electricity and discharging during peak time periods, to save cost. The BESS could also be reconfigured for peak / maximum demand reduction in order to reduce NMD and demand charges. These functions could either be programmed into the IPP’s control system, given the required inputs such as load levels from the Eskom meters, or could be carried out within the Municipality’s control centre with a dispatch signal / load set point being sent to the IPP’s BESS.

In summary, the various control and dispatch functions that must be carried out for each option must be considered in the context of the other load shedding, load reduction and energy cost saving initiatives underway in the Municipality. The timing and capability of the Municipality’s control centre project, and the information required to make dispatch decisions must also be

considered. The control philosophy and requirements would then need to be defined and outlined in the RFP and/or PPA.

4.5.5 WESTERN CAPE GRID CAPACITY

The Generation Connection Capacity Assessment of the 2025 Transmission Network (“**GCCA 2025**”) prepared by Eskom shows that the generation connection capacity in the Northern Cape, Western Cape, Eastern Cape, and Hydra Central supply areas has been depleted. Parts of the transmission network located within the most favourable areas for wind and PV generation such as the Northern Cape, Eastern Cape, Western Cape, and Hydra Central have no capacity, as all of the capacity has been depleted from previous REIPPPP bid window rounds and private off takers. The grid was initially constrained in the Northern Cape supply area and has now extended to the Greater Cape supply area, with reduced capacity in the remaining parts of the country. Unfortunately, the required transmission corridor strengthening to unlock grid capacity and alleviate these constraints will only be commissioned from 2028 onwards, despite being expedited and prioritised at the level of the Presidency. Current grid constraints on the Eskom transmission network in the Western Cape have resulted in Eskom introducing a curtailment regime to unlock additional network capacity to accommodate more wind renewable energy plants.

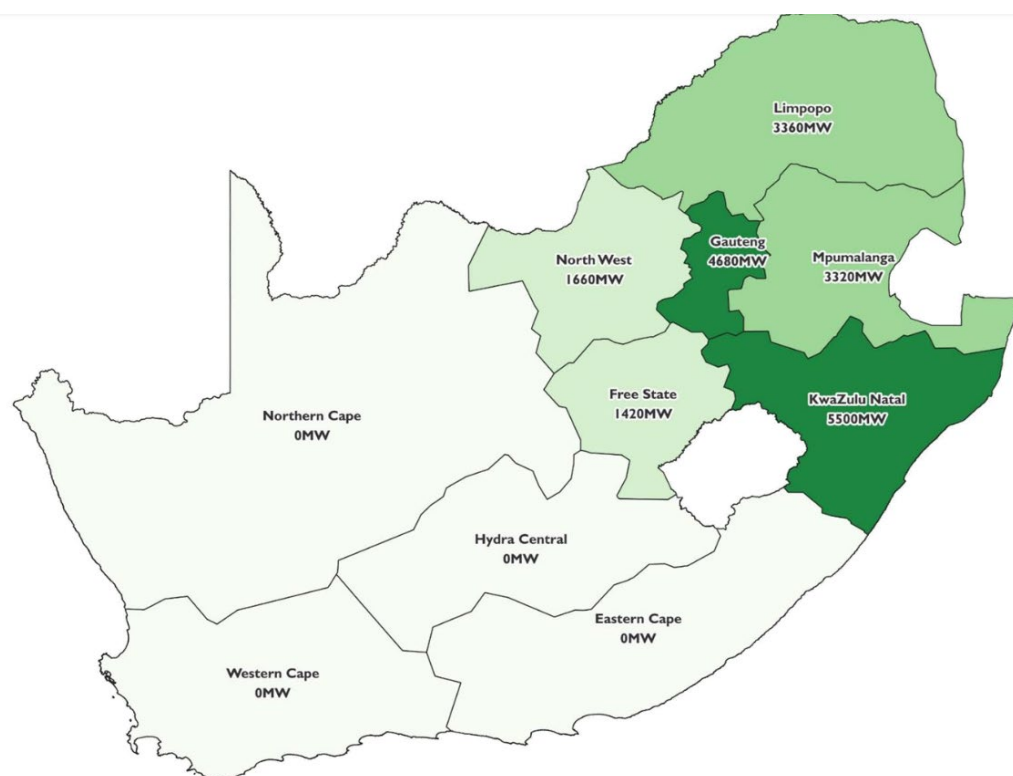


Figure 4-35 GCCA 2025 Supply Area Results Showing 0MW Capacity in the Greater Cape

Connecting a large solar PV plant anywhere within the Stellenbosch Municipality networks will have a negative impact on the Eskom Western Cape supply area evacuation capacity constraint.

Connecting a large solar PV plant anywhere within the Municipality's distribution networks will have a negative impact on the Eskom Western Cape supply area evacuation capacity constraint. It is unclear if a large solar PV plant connected behind the meter would have to apply to the Eskom grid access unit for approval (refer to legal section for a more detailed opinion). The TA Team has not been able to obtain a conclusive response from Eskom on this aspect. This requires resolution and it is recommended that the Municipality and or WCG pursue this topic directly with Eskom to obtain formal written confirmation.

A legal perspective on this issue is provided in **section 5.3.10** of this report.

4.6 FINANCIAL EVALUATION OF THE OPTIONS

4.6.1 SUPPLY ANALYSIS

The Municipality electricity supply sources include direct supply from Eskom, Drakenstein Municipal Network, and renewable energy from embedded SSEG customers. Based on a review of the Municipality's billing report (2022/23), as well as Eskom and Drakenstein invoices (July 2022 to June 2023), supply source attributes are summarized in **Table 4-18**.

Table 4-18 Existing Tariff Structure

Source	Eskom	Drakenstein Mun	IPP's +SSEG's
Points of Supply	Franschoek; Cloeteville; and Stellenbosch	Rhodes Food Group; Pniel; and Hollandse Molen	Embedded
Eskom Tariff Plan	Megaflex (LA**)	Megaflex (LA**)	n/a
Eskom Transmission Zone	> 900km	> 900km	n/a
Supply Voltage	≥ 66kV & ≤ 132 kV	≥ 500 V & < 66 kV	n/a
Customer Segmentation	Key customers	> 1 MVA	n/a
Additional Margin	n/a	25%	n/a
Notified Maximum Demand (MVA)	86	9	n/a
Supply Volume (MWh)	315 738	27 380	1 119
Supply Volume Contribution (%)	91.7%	8.0%	0.3%
2022/23 Average Cost of Supply (c/kWh)	150	203	ignored
2023/24 Average Cost of Supply (c/kWh)	175*	237*	ignored

**based on adjusted rates from Eskom 2023/24 Tariff Book; **LA – Local Authority*

From **Table 4-18**, the following observations/comments are made:

- i. Renewable energy supply from SSEGs constitutes only 0.3% of measured energy supply and is therefore **excluded from further analysis for reason of immateriality**. (Note: as at Jan 2024, total registered SSEG PV and BESS capacity stands at 6180 kW and 936kWh respectively. Assuming a rooftop solar capacity factor of 26.5%, the installed PV capacity translates to 3.8% of the total 2023 load (loadshedding excluded). However, actual installations appear to be understated, considering the mid-day consumption reduction (summer weekday) between 2022 and 2023).
- ii. The total weighted average supply cost for 2022/23 translates to **154 c/kWh** with an inferred cost of **180 c/kWh** in 2023/24 using 2022/23 invoice volumes.
- iii. The high cost of supply from Drakenstein Municipality (203 c/kWh) is due to a 25% margin added to the Eskom MegaFlex tariff as per 2022/23 invoices. Stellenbosch Municipality has indicated that a single Eskom-supplied substation in the Pniel area is planned within the next two years that will effectively replace Drakenstein rates with lower Megaflex rates¹⁴.
- iv. Considering point iii above, tariff assumptions for the **existing Drakenstein connections have been amended to a single connection point at a tariff structure similar to the existing Stellenbosch connections (applicable to all further analysis)**. (Note: substituting the Drakenstein tariff with the existing Megaflex tariff reduces the weighted average cost of supply from **180 c/kWh** to **175 c/kWh** (inferred, using 2022/23 demand volumes and 2023/24 tariffs)).

4.6.2 PROPOSED ESKOM TARIFF

Eskom submitted a tariff restructuring plan¹⁵ to NERSA during 2022, requesting various changes to the existing Megaflex tariff, which forms the basis for all other tariff plans.

¹⁴ Agreement (signed July 2018) between Drakenstein and Stellenbosch municipalities; Pniel electricity network to be transferred to Stellenbosch, which will endeavor to obtain direct Eskom connection within three years from take-over; Drakenstein to supply energy (at margin) until Eskom direct supply in place.

¹⁵ Eskom retail tariff plan for the restructuring of Eskom tariffs for implementation 2023/24 (05 August 2022)

The main reason for the proposed tariff restructuring pertains to accurate cost recovery in a changing electricity supply and demand environment, and proposed unbundling of services (e.g. generation and transmission).

A MunicFlex tariff is proposed to replace the existing MegaFlex Local Authority tariff. Although the tariff restructuring request was not approved by NERSA at the time, it is expected that Eskom will again submit a request in the short to medium term that will probably be approved (*draft updated restructuring report expected by the end of 2024 based on discussions with Eskom*).

Salient points associated with the proposed restructuring plan include the following:

- Peak morning time-of-use hours will reduce from three, to two hours, while the evening peak will be increased from two, to three hours (current Time of Use (“**ToU**”) shown in **Figure 4-36**);
- A generation capacity charge will be added, based on the connection point NMD;
- Rebalancing or adjustment of the other fixed and variable cost components applicable.

Expected future energy market liberalisation (i.e. transitioning to a balancing market) may require further tariff adjustment; the impact of which is not yet clear at this stage.

The proposed tariff transition will increase the fixed cost component of Eskom grid supplied electricity and decrease the variable portion, which will have a detrimental effect on cost savings associated with renewable energy interventions. The effect of the proposed tariff restructuring will be shown in the sections to follow. The financial analysis includes a set of outputs based on proxy IPP tariffs and incorporating the expected restructuring to indicate the potential impact of the changes from the Megaflex to the MunicFlex tariffs.

Current TOU							
Low Season				High Season			
	Weekday	Saturday	Sunday		Weekday	Saturday	Sunday
0	3	3	3	0	3	3	3
1	3	3	3	1	3	3	3
2	3	3	3	2	3	3	3
3	3	3	3	3	3	3	3
4	3	3	3	4	3	3	3
5	3	3	3	5	3	3	3
6	2	3	3	6	1	3	3
7	1	2	3	7	1	2	3
8	1	2	3	8	1	2	3
9	1	2	3	9	2	2	3
10	2	2	3	10	2	2	3
11	2	2	3	11	2	2	3
12	2	3	3	12	2	3	3
13	2	3	3	13	2	3	3
14	2	3	3	14	2	3	3
15	2	3	3	15	2	3	3
16	2	3	3	16	2	3	3
17	2	3	3	17	1	2	3
18	1	2	3	18	1	2	3
19	1	2	3	19	2	3	3
20	2	3	3	20	2	3	3
21	2	3	3	21	2	3	3
22	3	3	3	22	3	3	3
23	3	3	3	23	3	3	3
Peak	1	Standard	2	Off-Peak	3		

Figure 4-36: Eskom Current ToU classification

4.6.3 IPP TARIFF ESTIMATION

An important consideration in the analysis of renewable energy options pertains to the estimation of appropriate IPP Tariffs that could be expected from bidders. The following section provides an overview of the methodology followed to determine proxy tariffs that were then used in further analysis.

Table 4-3 shows the various main renewable energy supply options considered (i.e. 1A; 1B; 2A; 2B; 3A; and 3B). A tariff calculation was also done for a 47.4MW PV and 10MWh battery (Option 2A10S) to test the financial feasibility of a smaller battery configuration. Finally, Options 2A and 2A10S were also evaluated on a “no loadshedding (NLS)” basis (i.e. Option 2A NLS and Option 2A10S NLS respectively).

Given the complexity of the various technology options, proposed installations at the Stellenbosch substation were used as a proxy for tariff estimation at the other connection points and limited to 1A; 2A; 2A NLS; 2B; 3A; 3B; 2A10S and 2A10S NLS. Tariff estimation

for options 2B and 3B utilised full generation and load information per the assumed technology set-up.

Estimated IPP tariffs for the above options are shown in **Table 4-19** below.

Table 4-19 IPP Tariff Estimation

Options	Tariff (R/kWh)
1A (Stellenbosch Substation)	0,95
2A (Stellenbosch Substation)	2,16
2A NLS* (Stellenbosch Substation)	2,31
2B (Stellenbosch Total)	2,31
3A (Stellenbosch Substation)	2,62
3B (Stellenbosch Total)	2,37
2A10S (Stellenbosch Substation)	1,19
2A10S NLS* (Stellenbosch Substation)	1,22

*NLS: No Loadshedding

Key IPP tariff estimation assumptions include the following:

- Nominal IPP IRR return: 15%;
- Debt/Equity structure: 70%/30%;
- Shareholders loans/share capital: 75%/25%
- Senior Debt Term: 16 years (14 years for 16-year PPA assumption)
- Senior debt base rate: 3month JIBAR forecast
- Senior debt margin: 2.7%
- Debt Service Reserve Account: 6 months
- Maintenance Reserve Account build-up used to fund battery replacement
- BESS grid charge: assume IPP will purchase energy from the Municipality as a cost pass-through (i.e. no margin added)
- Effect of battery degradation ignored
- IPP PPA duration: 20 years (16 years assumed for variations of Option 2, aligning with expected battery replacement)
- PPA contract type: Take-or-Pay (i.e. paying for curtailed energy as well)
- IPP tariff escalation: CPI

- BESS Project Cost: US\$ 365 /kWh¹⁶ (assuming R/US: 19)
- Solar PV Project Cost: R 16.5 mil/ MW¹⁷ (includes 10% contingency)
- BESS and solar PV plant operating cost assumed at 4% and 2% of Capex respectively and escalating at CPI
- Site rental and socio-economic development expenses assumed at 2% and 1% of revenue; and
- Battery replacement at year 10 assuming 55% of total initial value (Options 3A and 3B)
- IPP tariff base date at the beginning of the 2024/25 financial year
- Internal models used for tariff estimation - pricing model from previous studies (J Maynard) provided similar results (refer Annexure G for model details)

The following important caveats, with potential material impact in relation to the IPP tariff estimates, are summarised as follows:

- Smaller plant sizes are expected to have higher IPP tariffs considering that some project cost elements (e.g. development, transaction and connection costs) may be similar to larger projects.
- Project cost assumptions are based on commercial scale benchmark projects with no consideration of site-specific cost e.g. more expensive land or capex related to long connection lines.
- Tariff estimations related to PV + BESS options are materially influenced by energy volume sales, which is informed by the plant operating strategy.
- Plant size and related project values may affect debt terms (e.g. durations) offered by banks, which will affect the IPP tariffs.

Notwithstanding the above caveats, the tariff estimates are adequate for feasibility study purposes, allowing for comparison of technology options against each other based on their financial feasibility and affordability (i.e. cost of supply and overall savings).

¹⁶ Lazard's Levelized Cost of Energy Analysis – Version 16 (April 2023)

¹⁷ Cresco Project Benchmark Data

4.6.4 NET PRESENT VALUE ANALYSIS

Overall financial feasibility associated with the options analysis is measured through an NPV calculation. Potential savings are calculated with the following formula and then discounted to present value by using a client specific hurdle rate.

$$\begin{aligned} \text{Annual Savings (Nominal)} &= \text{Grid Cost (Before RE IPP)} \\ &\quad \text{minus} \\ &\quad (\text{Grid Cost (After RE IPP)} + \text{IPP Cost} - \text{Wheeling Credits}) \end{aligned}$$

* RE IPP: Renewable Energy Independent Power Producer

**Note: wheeling credits only applicable to energy wheeling arrangement

Subsequent to calculating the annual savings over the duration of the PPA period, a discount rate is then used to determine the current value of savings. The total NPV Savings value is then divided by the total IPP energy produced (over the PPA duration), which provides a comparable figure across the various renewable energy technology and sizing options.

Key NPV Savings Calculation Assumptions include the following:

- IPP PPA duration of 20 years (take-or-pay);
- IPP Tariff increase at CPI (refer Annexure G) ;
- Eskom escalation higher than CPI up to 2029, then follows CPI (refer Annexure G);
- Stellenbosch Municipality Discount Rate = 11% (average cost of current long-term debt);
- Drakenstein Tariff Structure replaced with Megaflex; and three connection points in Pniel reduced to single Eskom substation;
- MunicFlex introduction and time-of-use adjustment considered;
- Any excess renewable energy curtailed;
- All scenarios assumed as behind-the-meter (no wheeling charges), save for Option 1C (Solar Energy Wheeling), which assumed 100% wheeling to all the off-take points (using the Eskom wheeling framework / cost structure as obtained from the 2023/24 Eskom tariff book).

- **“Profit benefit on additional energy” of R 0.96/kWh¹⁸ assumed for the first 10 years of the PPA where technology options result in loadshedding reduction.**
- A benchmark IPP project in the Free State area was used as input for the wheeling option (1C), at a tariff of R 0.90 c/kWh (indicative). Notwithstanding, tariff level subject to purchase volume and seller type (e.g. IPP, aggregator, or energy trader).
- NPV savings base date at the beginning of the 2024/25 financial year

Based on the analysis results shown below **Table 4-20**; the following main observations and comments are made:

- i. Options 1A and 1B achieve the highest savings under the current Megaflex Tariff Structure (R395/MWh and R393/MWh respectively); and remain positive under the proposed MunicFlex tariff structure and a 10% tariff flex; *(Note: Option 1B (under Megaflex structure) reduce from R 393/MWh to R378/MWh, if wheeling cost apply to energy exported from the Stellenbosch substation to the other three connection points)*
- ii. Option 1C achieves second highest savings (R355 /MWh); and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex;
- iii. Options 2A, 2B, 3A, and 3B are loss-making over the duration of the PPA period under the current Megaflex-, and proposed MunicFlex tariff structures;
(Note: running Option 2A (Stellenbosch only) under a no-loadshedding scenario (more efficient battery utilisation and using Megaflex tariff structure) still result in a negative NPV savings value, albeit smaller (-R5/MWh).)
- iv. Option 2A10S provides savings under the current Megaflex tariff structure (R321/MWh); and remains positive under the proposed MunicFlex structure and a 10% tariff flex. A further sensitivity was run for this option under a no loadshedding scenario (Option 2A10S NLS), the latter which provided positive savings under the current Megaflex (R293/MWh) and MunicFlex (R152/MWh) tariff structures.

¹⁸ Figure based on difference between average electricity sales price (2022/23 AFS): R 2.34/kWh; and average cost of supply (2022/23 Supply Invoices): R 1.54/kWh; and then escalated at 2023/24 Eskom tariff increase rate (18,49%)

- v. Finally, avoided diesel cost shown in **Table 3-10** are immaterial in the context of losses associated with large batteries. However, reduced avoided cost does strengthen the business case for a smaller battery option (e.g. Option 2A10S).

From the above, we conclude that embedded PV remains the best choice from a purely energy cost saving point of view. It is also noted that the large batteries required for complete loadshedding reduction are not economical (with due consideration of the profit benefit associated with lower unserved energy), given low utilisation levels (batteries substantially used for dispatch during load-shedding) and high capex cost. Finally, a smaller battery can provide savings, as well as limited assistance with the reduction of unserved energy. In the event that loadshedding ends, the latter can also be used for energy arbitrage.

The following important caveats in relation to the NPV Savings values are mentioned:

- Material movement in final IPP tariffs will have a significant impact on the savings values of the technology options and will only be known subsequent to the conclusion of and RFQ/RFP process.
- The proposed MunicFlex rate adjustment is expected to have a material impact on renewable energy cost savings and is therefore a key consideration for the final technology choice and sizing.
- The NPV savings model assumes steady state load over the next 20 years, which does not consider energy demand growth, or the effect of reduced consumption related to private rooftop solar installation growth.

Table 4-20 NPV Savings Analysis : Results Summary

Scenario	Total Energy Demand (loadshedding excluded)	Unserviced Energy (Year 1)	Total IPP Energy Produced	Excess Energy (over 20 years)	NPV of Total Savings	NPV of Total Savings	PV System Size	BESS Size	IPP Tariff	Battery Grid Charged
	MWh	%	MWh	%	R '000	R / MWh	MWp	MWh	R/kWh	Yes/No
Current Eskom Megaflex and TOU Structure										
1. Current TOU; Option 1A (10%)	7 024 224	7,8%	2 315 253	10%	915 308	395	52	-	0,95	n/a
1. Current TOU; Option 1A (10%)(+10%)	7 024 224	7,8%	2 315 253	10%	797 213	344	52	-	1,05	n/a
3. Current TOU; Option 1B (10%)	7 024 224	7,8%	2 445 991	12%	962 052	393	55	-	0,95	n/a
3. Current TOU; Option 1B (10%)(+10%)	7 024 224	7,8%	2 445 991	12%	837 288	342	55	-	1,05	n/a
5. Current TOU; Option 1C (10%)	7 024 224	7,8%	2 466 236	6%	875 380	355	52	-	0,90	n/a
5. Current TOU; Option 1C (10%)(+10%)	7 024 224	7,8%	2 466 236	6%	756 644	307	52	-	0,99	n/a
7. Current TOU; Option 2A (10%)	7 604 731	0,1%	3 391 897	9%	(508 207)	(150)	71	154	2,16	yes
9. Current TOU; Option 2B (10%)	7 600 087	0,2%	2 754 274	6%	(411 135)	(149)	71	110	2,31	yes
12. Current TOU; Option 3A (10%)	7 470 580	1,9%	2 778 149	5%	(1 022 590)	(368)	63	154	2,62	no
14. Current TOU; Option 3B (10%)	7 496 098	1,6%	2 901 629	3%	(613 364)	(211)	67	150	2,37	no
17. Current TOU; Option 2A10S (10%)	4 977 885	3,9%	2 136 148	10%	686 462	321	48	10	1,19	yes
17. Current TOU; Option 2A10S (10%)(+10%)	4 977 885	3,9%	2 136 148	10%	550 297	258	48	10	1,31	yes
19. Current TOU; Option 2A10S NLS (10%)	5 181 717	-	2 147 101	10%	630 052	293	48	10	1,22	yes
19. Current TOU; Option 2A10S NLS (10%)(+10%)	5 181 717	-	2 147 101	10%	489 817	228	48	10	1,34	yes
18. Current TOU; Option 2A NLS (10%)	5 181 717	-	2 377 873	9%	(10 752)	(5)	48	100	2,31	yes
MunicFlex and Proposed TOU Structure										
1. Proposed TOU; Option 1A (10%)	7 024 224	7,8%	2 315 253	10%	594 091	257	43	-	0,95	n/a
3. Proposed TOU; Option 1B (10%)	7 024 224	7,8%	2 445 991	12%	609 682	249	55	-	0,95	n/a
5. Proposed TOU; Option 1C (10%)	7 024 224	7,8%	2 466 236	6%	409 101	166	52	-	0,90	n/a
7. Proposed TOU; Option 2A (10%)	7 604 731	0,1%	3 391 897	9%	(963 177)	(284)	71	154	2,16	yes
9. Proposed TOU; Option 2B (10%)	7 600 087	0,2%	2 754 274	6%	(801 260)	(291)	71	110	2,31	yes
12. Proposed TOU; Option 3A (10%)	7 470 580	1,9%	2 778 149	5%	(1 397 840)	(503)	63	154	2,62	no
14. Proposed TOU; Option 3B (10%)	7 496 098	1,6%	2 901 629	3%	(1 042 626)	(359)	67	150	2,37	no
17. Proposed TOU; Option 2A10S (10%)	4 977 885	3,9%	2 136 148	10%	409 214	192	48	10	1,19	yes
17. Proposed TOU; Option 2A10S (10%)(+10%)	4 977 885	3,9%	2 136 148	10%	273 048	128	48	10	1,31	yes
19. Proposed TOU; Option 2A10S NLS (10%)	5 181 717	-	2 147 101	10%	326 553	152	48	10	1,22	yes
19. Proposed TOU; Option 2A10S NLS (10%)(+10%)**	5 181 717	-	2 147 101	10%	186 318	87	48	10	1,34	yes

*Total energy demand and generation measured over 20-year PPA duration ** (10%)(+10%) meaning: 10% curtailment; +10% tariff increase

4.6.5 COST OF SUPPLY ANALYSIS

In addition to the NPV savings analysis, the effect of IPP renewable energy on the blended cost of supply (Eskom + IPP) was also measured. The existing energy supply analysis shown in **Table 4-18** analysed the cost of supply from 2022/23 monthly invoices (i.e. monthly ToU categories). However, Eskom cost calculations are expected to move from monthly to hourly ToU reconciliation in future; as such, annual load, generation, and curtailed energy/cost were reconciled from hourly profiles.

Main assumptions applicable to the cost of supply analysis have been included below:

- At the time of analysis, only hourly demand for the 2022 calendar year was available for Eskom and Drakenstein connections points. The analysis therefore considers the 2022 demand profile together with the 2024/25 tariff structure;
- Drakenstein connection points assumed to be replaced with a single Eskom supply substation on similar tariff structure as existing Stellenbosch Eskom connection points;
- Effect of proposed tariff transition to MunicFlex also modelled;
- Adjusted load profiles used in options where PV+BESS result in reduced load-shedding;
- Profit benefit associated with additional energy sales due to reduced load-shedding not considered;
- Base date for cost of supply analysis 2024/25 financial year; and
- Average cost of energy post IPP introduction includes the cost of curtailed energy
- All scenarios assumed as behind-the-meter (no wheeling charges), save for Option 1C (Solar Energy Wheeling), which assumed 100% wheeling to all the off-take points (using the Eskom wheeling framework / cost structure as obtained from the 2023/24 Eskom tariff book).
- (Note: refer Annexure G for model input detail)

Average cost of supply movement was tested for most of the technology options covered in **Section 4.6.4**.

Table 4-21 shows expected average unit cost of energy pre and post IPP renewable energy introduction for the current Megaflex tariff structure, as well as the proposed MunicFlex structure.

Table 4-21 Cost of Supply Analysis

		1A	1B	1C	2A	2B	2A NLS	3A	3B	2A10S	2A10S NLS
Energy Sold	MWh/yr	351 211	351 211	351 211	380 237	380 004	380 790	373 529	374 805	361 235	380 791
Total Generation	MWh/yr	120 335	127 131	128 183	176 294	143 154	123 590	144 394	150 812	111 026	111 596
IPP Cost of Supply (2024/25)	R/kWh	0,95	0,95	0,90	2,16	2,31	2,31	2,62	2,37	1,19	1,22
Current Cost Structure (Megaflex)											
- Status Quo (2023/24)*	R/kWh	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80	1,80
- Drakenstein Replaced (2023/24)	R/kWh	1,75	1,75	1,75	1,74	1,74	1,74	1,74	1,73	1,75	1,74
- Drakenstein Replaced (2024/25)	R/kWh	1,98	1,98	1,97	1,96	1,96	1,96	1,96	1,95	1,97	1,96
- Post IPP Introduction (2024/25)	R/kWh	1,79	1,79	1,82	2,26	2,23	2,07	2,36	2,26	1,87	1,85
- Saving (2024/25)**	c/kWh	19	19	16	-30	-27	-11	-40	-31	10	10
Tariff Rebalance Saving	c/kWh	4	4	4	5	5	5	5	5	5	5
Proposed Cost Structure (MunicFlex)											
- Drakenstein Replaced (2023/24)	R/kWh	1,72	1,72	1,72	1,69	1,69	1,69	1,69	1,69	1,71	1,69
- Drakenstein Replaced (2024/25)	R/kWh	1,94	1,94	1,94	1,90	1,90	1,90	1,91	1,90	1,92	1,90
- Post IPP Introduction (2024/25)	R/kWh	1,86	1,86	1,89	2,34	2,29	2,14	2,43	2,34	1,92	1,89
- Saving (2024/25)**	R/kWh	8	8	5	-44	-39	-23	-52	-43	0	1

*2022/23 Tariffs Escalated @ 18.49% and 12.72% to arrive at 2023/24 and 2024/25 Tariffs respectively

From the **Table 4-21** we note the following:

- i. average cost of supply **reduces** between 16c/kWh¹⁹ to 19c/kWh for variations of Options 1; while cost of supply **increases** between 11c/kWh to 40c/kWh for variations of Option 2 and Option 3 (with the exception of a 10c/kWh **saving** for both 2A10S and 2A10 NLS); *(Note: Savings under Option 1B (assuming Megaflex structure) reduce by ca 1.3 c/kWh, if wheeling cost apply to energy exported from the Stellenbosch substation to the other three connection points)*
- ii. the introduction of MunicFlex reduces overall savings of renewable energy, which accentuates savings and losses mentioned above.

The cost of supply model was also used to calculate break-even tariffs (i.e. the IPP tariff that would provide zero savings in the first year of operation) for Scenarios 1B and 1C. Under the current Megaflex tariff structure, these were calculated at R1.47/kWh and R1.33/kWh for Scenario 1B and 1C respectively (R1.23/kWh and R1.13/kWh under the proposed MunicFlex structure).

The following important caveats in relation to the cost of supply calculations are noted:

- It is important to note that higher Eskom tariff increases in comparison to CPI linked IPP tariff increases will see a growing gap between the average utility- and IPP tariffs; and therefore, have to be considered together with NPV savings.
- Stellenbosch Municipality indicated that above inflation energy tariff increases are not affordable for the average household; hence, technology solutions that increase the current cost of supply would be less favourable.
- The future MunicFlex rate adjustment is a key consideration for the calculation of the cost of supply.

¹⁹ The reduction may seem small considering e.g. a penetration rate of ca 31% for Options 1A; and the difference between the cost of supply (R1.98/kWh) and estimated IPP Tariff (R0.95/kWh). The blended tariff considers Eskom ToU energy unit substitution, as well as the cost of curtailed energy (10%).

4.6.6 AFFORDABILITY ASSESSMENT

The financial consequences of the PPA terms relate to: budget *liquidity* (increased or decreased cost of energy supply); *credit support* (buyer default termination payment and payment security), and long-term contract *accounting treatment*.

4.6.6.1 Liquidity

The adjusted unit cost of supply associated with the proposed technical options per **Section 4.6.5** have been summarised in **Table 4-21**. Total savings (or loss) associated with the introduction of each IPP option *vis-à-vis* normal Eskom supply have been included in **Table 4-22**. It shows actual Eskom cost of supply pre and post IPP introduction; IPP cost; and Blended Cost (IPP+Eskom) for the Megaflex and proposed MunicFlex tariff structures. It also shows the savings associated with the Eskom tariff structure adjustment before any IPP energy introduction. The results summary shows the effect of the various technology options on the 2024/25 financial liquidity of the Municipality. (Note: The table must be read in conjunction with **Table 4-20**, which provides the NPV saving over a 20-year PPA duration.)

Over the short term, options 1A, 1B and 1C provides the highest savings at R 28 mil/year and R 17 mil/year respectively under a MunicFlex tariff structure. Under the same tariff structure, the small battery Options 2A10S and 2A10S NLS provides marginal savings.

The only negative effect on the municipal budget would be the cost of anticipated PPA credit support requirements. The current trend for utility scale (private/corporate) solar and wind projects include buyer termination guarantees (generally corporate or parent company guarantee up to 36 months of future IPP revenue) and liquid payment security (e.g. letter of credit or escrow account up to 6 months of future IPP revenue). Notwithstanding, the corporate PPA market is evolving, and we expect the termination and payment credit support to reduce in the short to medium term. For Option 1A (example): assuming a total credit support requirement between 12 to 36 months, and 1.75% guarantee fee; the additional cost translate to between 1.7c/kWh to 5.3c/kWh respectively.

Based on the above, we note that municipal budget liquidity will be least impacted by imbedded solar PV options (1A/1B).

4.6.6.2 Solvency and Reporting Requirements

According to GRAP (Standard of Generally Recognised Accounting Practice) 19 (paragraph 94) a guarantee may have to be reported as a provisional liability on the balance sheet of the Municipality:

“An entity recognises a provision for financial guarantees and load commitments when it is probable that an outflow of resources embodying economic benefits and service potential will be required to settle the obligation and a reliable estimate of the obligation can be made.”

Additionally, the balance sheet debt capacity is determined in terms of the following equation (National Treasury Circular 71):

$$\text{Total Debt} / (\text{Total Operating Revenue} - \text{Operating Conditional Grants})$$

(Max Limit: Norm: 45%)

Most recent debt and revenue forecast were provided by the Stellenbosch Municipality financial department (8 May 2024). (It is noted that forecast debt value differ from the Medium-Term Revenue and Expenditure Framework (2024) debt forecasts).

Table 4-22: Debt Forecast

	2024/25	2025/26	2026/27
Debt Forecast *	783 092 180	905 479 814	1 009 574 752
Operating Revenue	2 631 276 396	2 872 924 702	3 161 257 718
Operational Conditional Grants	245 637 999	299 530 450	356 393 151
Debt Forecast per MTREF (2024)**	1 076 572 000	1 234 062 000	1 374 900 000
Debt Capacity Ratio***	32,8%	35,2%	36,0%

*Debt forecast received via email from financial department 8 May 2024

**Debt forecast per Medium Term Revenue and Expenditure Framework (2024)

*** Debt Capacity Ratio per Treasury regulation 71 (norma: 45%)

Using the 2024/25 forecast data, debt ratios were then calculated by adding upper and lower guarantee values associated with each of the technology options to the long-term debt values. As shown in **Table 4-23**, the debt levels are above 45% for all the options subsequent to adding the upper guarantee level (36month IPP revenue), and therefore outside the Treasury regulation 71 norm.

At the lower guarantee bound (12-month IPP revenue); Option 1A has the smallest effect on the balance sheet debt capacity. Options 1C and 2A10S are also below the 45% norm.

Based on the above, municipal budget solvency requirements can accommodate expected lower-end guarantee requirements for Options 1A. Given that this option has the lowest annual IPP cost, balance sheet debt capacity will be least affected.

We note that the balance sheet capacity limitation would be a universal problem across most municipalities. To this end, it is worth mentioning that the Western Cape Government are engaged in discussions with the World Bank re possible credit enhancement mechanisms that could address the solvency restrictions.

Table 4-23 Technology Options Liquidity and Solvency Results

		1A	1B	1C	2A	2B	2A NLS	3A	3B	2A10S	2A10S NLS
Demand (LS Included)	MWh/yr	351 211	351 211	351 211	380 237	380 004	380 790	373 529	374 805	361 235	380 791
Total Generation	MWh/yr	120 335	127 131	128 183	176 294	143 154	123 590	144 394	150 812	111 026	111 596
Excess Renewable Energy	MWh/yr	12 034	14 643	8 065	16 299	8 544	10 770	7 067	4 653	11 089	10 843
IPP Cost of Supply (2024/25)	R/kWh	0,95	0,95	0,90	2,16	2,31	2,31	2,62	2,37	1,19	1,22
Current Cost Structure (Megaflex)											
Eskom Cost (100%)	(R'mil/yr)	695	694	693	744	744	745	731	732	711	745
IPP Cost	(R'mil/yr)	114	121	115	381	331	285	379	358	132	136
Eskom Cost Post IPP	(R'mil/yr)	515	507	312	477	515	504	502	489	544	570
Blended Cost	(R'mil/yr)	629	628	638	858	846	789	881	846	676	706
Savings (Year 1)	(R'mil/yr)	66	66	55	-113	-102	-44	-150	-114	36	39
NPV Savings (20 years)	(R'mil)	915	962	875	-508	-411	-11	-1023	-613	686	630
Tariff Rebalance Saving	(R'mil/yr)	13	13	13	20	20	20	18	18	17	20
Proposed Cost Structure (MunicFlex)											
Eskom Cost (100%)	(R'mil/yr)	681	681	680	724	724	725	713	713	695	725
IPP Cost	(R'mil/yr)	114	121	115	381	331	285	379	358	132	136
Eskom Cost Post IPP	(R'mil/yr)	538	533	386	509	540	528	529	518	562	585
Blended Cost	(R'mil/yr)	653	653	662	890	871	814	908	876	694	721
Savings (Year 1)	(R'mil/yr)	28	28	17	-166	-147	-88	-195	-163	1	4
NPV Savings (20 years)	(R'mil)	594	610	409	-963	-801	-	-1398	-1043	409	327
Balance Sheet Impact											
Guarantees (36 months)	(R'mil/yr)	360	380	363	1199	1042	898	1192	1126	417	429
Guarantees (12 months)	(R'mil/yr)	114	121	115	381	331	285	379	358	132	136
Municipal Debt (2024/25)	R'mil	783	783	783	783	783	783	783	783	783	783
Operating Revenue (2024/25)	R'mil	2 631	2 631	2 631	2 631	2 631	2 631	2 631	2 631	2 631	2 631
Operational Conditional Grants (2024/25)	R'mil	246	246	246	246	246	246	246	246	246	246
Debt Ratio (36 months)	%	48%	49%	48%	83%	77%	70%	83%	80%	50%	51%
Debt Ratio (12 months)	%	37,6%	37,9%	37,7%	48,8%	46,7%	44,8%	48,7%	47,8%	38,4%	38,5%

4.6.7 BANKABILITY CONSIDERATIONS

Bank requirements associated with IPP project debt represent a key consideration in the financial feasibility analysis of the various options. The ability to raise long-term debt is one of the key drivers to keep IPP tariffs at affordable levels. Potential IPP projects will be evaluated by banks according to the following guidelines:

- i. ***ability to wheel IPP energy to off-takers outside the municipal distribution network***; in order for the bank to take a market view on an IPP project, the ability of the project to export energy (in the event that offtake by the Municipality terminates for some reason) will be a key consideration. If this is not achievable, it can potentially have an impact on the attractiveness of the funding terms lenders will be able to offer.
- ii. ***smaller IPP projects may find it difficult to attract project debt funding in a highly competitive renewable energy industry***; commercial banks favour higher fees associated with larger project sizes, which are generally also more commercially viable (we note that the proposed 50MW project will be perceived as small in terms of project finance standards); Notwithstanding, development finance institutions (e.g. DBSA and IDC) may be more flexible in this regard.
- iii. ***project competitiveness (with emphasis on resource quality and cost curve advantages)***; banks consider the quality of the renewable energy resource, as well as the development cost competitiveness of projects against industry benchmarks; both of these elements provide the basis for competitive tariff setting; and provide a natural hedge against potential future regulatory changes that may affect project profitability (an example here could include the effect of the proposed Eskom tariff adjustments).

4.6.8 NEED FOR COST OF SUPPLY STUDY

A COS Study is one of the most important considerations in establishing and designing electricity rates that are implemented to provide the service required by customers and recover costs incurred by licensees. The objective of COS Study is to apportion all costs required to service customers among each customer class in a fair and equitable manner. NERSA has developed the Cost of Supply Framework in order to promote sustainability of the electricity supply industry while protecting customers against unduly high prices.

NERSA's Cost of Supply Framework states: "*Policy position 23 of the Electricity Pricing, 1998 (GG No. 31741 of 19 December 1998) ("the EPP") states that: Electricity distributors shall undertake Cost of Supply (COS) studies at least every five years, but at least when significant licensee structure changes occur, such as in customer base, relationships between cost*

components and sales volumes. This must be done according to the approved National Energy Regulator of South Africa (NERSA or ‘the Energy Regulator’) standard to reflect changing costs and customer behaviour.”

Based on the above, a cost of supply study may be required should final IPP tariffs result in material cost of supply movement.

4.6.9 ECONOMIC CONSIDERATIONS

Some of the effects of loadshedding on the local economy include loss of revenue, reduced productivity and economic growth; equipment damage; and potential job losses due to lower profitability to name a few.

Section 1.2 of this report makes mention of the MENMP which referenced the COUE (i.e. R93/kWh) in evaluating the economic benefit of Battery Energy Storage System (“BESS”) solutions. COUE provides an economic value to the cost of electricity interruptions to electricity customers and the economy and are used to inform investment and refurbishment decisions.

Based on the “Cost of Unserved Energy 2021 & 2022 Update, May 2023”, the direct and total COUE (on a national level and across all economic sectors) have been calculated at R40.08/kWh direct and R140.37/kWh total. The report states that the COUE is the measure used to provide an estimate of the cost of unplanned outages, and not appropriate for planned and longer duration interruptions as well as the impact of loadshedding on the economy.

In order to account for planned interruptions, Eskom commissioned an independent economic study (conducted by NOVA Economics) to estimate the Cost of Loadshedding (“**CoLS**”) on the economy. The overall impact of the CoLS based on this study is estimated between R7.61/kWh and R9.53/kWh (year 2020). Applying inflation to the estimate of R9.53/kWh from 2020, we arrive at an adjusted CoLS of R 12/kWh in 2024 terms, which was then used to calculate the total cost of loadshedding in **Table 4-24** below.

Table 4-24: Cost of loadshedding at the Stellenbosch Substation

		1A	2A	3A	2A10S
Unserved Energy	MWh/yr	20 217	472	4 788	10 193
CoLS	R/kWh	12	12	12	12
CoLS	R’Mil	243	6	57	122
Reduction (compared to 1A)	R’Mil		-237	-185	-120

Based on the above, PV and BESS options at the Stellenbosch substation (i.e. 2A, 2B and 2A10S) will achieve an economic benefit of between R 120 million to R 237 million per annum.

The result is based on the assumption that the Stellenbosch economy is representative of the national economy (which is not the case). Also, up until 2030 (when loadshedding is expected to substantially phase out), planned outages will probably fall outside business hours, given the positive supply impact of renewable energy (especially solar) during standard ToU periods.

Impact of Carbon Tax

The South African Carbon Tax Act was gazetted on 23 May 2019. The Act follows the polluter-pays-principle for large emitters; and incentivize firms towards adopting cleaner technologies. Carbon tax will initially only apply to scope 1²⁰ emitters in the first phase. The first phase will be from 1 June 2019 to 31 December 2022, and the second phase from 2023 to 2030. Unless businesses adopt renewable energy solutions, the carbon tax will bring an additional cost burden.

Finally, South Africa's high carbon intensity and low carbon price, exposes the country to possible reduced exports from carbon border adjustment mechanisms (CBAM). Current impact assessments suggest small initial impacts, becoming material as more goods and services are impacted, more countries implement cross boarder mechanisms and consumer choice turn away from carbon intensive products. Exports will be affected, unless business implement greener energy solutions and production methods.

4.7 LEGAL AND REGULATORY CONSIDERATION OF THE OPTIONS

The majority of the legal consequences discussed in **Section 5** of this feasibility study report apply irrespective of which technical option is ultimately selected. It should be noted that the options that contain a BESS component, such as options 2A and 2B, and 3A and 3B, will have to ensure compliance with the BESS Grid Code. The PPA would also need to cater for the BESS component.

With regards to options that entail multiple solar PV plants, such as options 1A, 2A, and 3A, we note that the multiplicity of PPAs binding the Municipality would inevitably result in a greater contract management burden than if only one PPA were concluded, but the risks of non-performance would be spread between contracts and not concentrated in one PPA. Option 1C, which would have a single solar PV plant connected to the Eskom transmission or distribution network instead of 'behind the meter', would entail a third party wheeling

²⁰ emissions from sources owned or controlled by an organisation – e.g. burning fuel in our fleet of vehicles

arrangement in addition to the PPA, which would require the IPP to conclude a wheeling agreement (or a connection and use of system agreement with a wheeling annexure) with Eskom, and the Municipality having to agree amendments to its electricity supply agreement with Eskom, or a separate agreement, to take account of the wheeling arrangement.

Lastly, options 3A and 3B are dependent on Eskom for approval in order for the Municipality to become a load curtailment customer, and it will be necessary to ensure that the arrangements between the IPP and the Municipality permit the Municipality to comply with the specifications and regulations set out in NRS 048-9 that cover load curtailment.

Further to the points raised above, **Section 5.3.10** of this feasibility study report details the regulatory requirements that impact on the selection of a Preferred Technical Solution Option.

4.8 SOCIO-ECONOMIC CONSIDERATION OF THE OPTIONS

The choice of technology and the geographic location of the Project can impact decisions around integrating socio-economic considerations into the Project. Utility-scale solar PV installations in South Africa have historically had a higher level of local content than utility-scale BESS. The level of maturity of the utility-scale solar PV installation market in South Africa has resulted in suppliers being able to locally produce and install PV panel mounting structures and a range of electrical balance of plant equipment. Whereas utility-scale BESS is relatively nascent in South Africa, resulting in the importation of fully built BESS units that meet the stringent performance requirements of an energy utility.

There is a real risk associated with local communities in relation to the construction and operation of utility-scale renewable energy power plants. The likely geographic location of the Project will influence the measures that the Municipality will take to mitigate this risk. Many community risk mitigation measures come at a cost to the Project (e.g. investments in social infrastructure and social well-being programmes in the locality of the Project). If the Project is not within the boundaries of the Municipality, it will likely diminish the appetite of the Municipality and its electricity consumers to increase the cost of the Project for the sake of community risk management. Regardless, socio-economic development measures that positively impact community risk management are strongly advised – the scale of those measures will need to be approved by the Municipality.

4.9 COMPARATIVE ANALYSIS OF THE OPTIONS

4.9.1 OVERVIEW OF THE APPROACH

The objective of this section is to present a summary of the comparative assessment of the technical solution options.

Firstly, the consolidated outcomes of the technical and financial modelling and assessments are presented to allow for a comparative analysis of the options.

The key technical assumptions and outputs presented include:

- PV and BESS sizes assumed
- percentage of unserved energy
- percentage of solar PV plant curtailment
- percentage of reduced Eskom consumption

The key financial assumptions and outputs presented include:

- Size assumed in financial model
- Energy sold (MWh per annum)
- Total generation or production by solar PV plant and BESS
- Calculated current average Municipal Cost of Supply (R/kWh)
- IPP cost of supply (R/kWh)
- Blended cost of supply (R/kWh)
- Reduction or increase in Municipal cost of supply
- NPV savings
- Estimated PPA guarantee requirement

Further to the technical and financial outputs the following factors were also considered:

- Measurement of the options against the Municipality's strategic objectives
- Qualitative factors which include the benefits, disadvantages and risks.

In addition to presenting the comparative analysis, a 'Decision and Key Issues Map' is presented to inform the Municipality of the key decisions and issues to resolve to enable a decision on a recommended procurement programme design.

4.9.2 COMPARATIVE TECHNICAL AND FINANCIAL ASSESSMENT THE OPTIONS

Table 4-25 presents the comparative technical and financial outcomes.

4.9.2.1 Summary conclusion on the technical assessment

A key objective of the technical assessment was to assess the Technical Solution Options against their contribution to reducing the Municipality's unserved energy as result of loadshedding. Reading from **Table 4-25** the following observations can be made.

For the 2022 reference year, the total amount of unserved energy due to loadshedding was 7.8% across the entire Municipality.

The Option 1 scenarios have little to no impact on loadshedding and do not reduce the percentage of unserved energy, as the plants are offline during events of loadshedding.

In the case of the Option 2 scenarios, which are the load shedding reduction scenarios, the solar PV plants combined with BESS reduce the quantum of loadshedding down from 7.8% of unserved energy, to 0.09% of unserved energy for scenario 2A. For 2B, the combined solar PV plant and BESS results in 0.23% of unserved energy for the year. Note that loadshedding is not completely eliminated. However, larger solar PV plant and larger BESS capacities than those modelled will result in a higher capex cost with only marginal reduction in the unserved energy.

In the case of the Option 2A 10 scenarios, which is the load shedding reduction scenario with a smaller battery size (10 MWh) the quantum of unserved energy was reduced from 7.8% to 3.93%.

In the case of the Option 3 scenarios, which are load curtailment scenarios, the solar PV plant and BESS plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.91% of unserved energy for scenario 3A. For scenario 3B, which is two solar PV plants and one BESS located at Stellenbosch, the plants reduce the quantum of loadshedding down from 7.8% of unserved energy, to 1.57% of unserved energy.

Note: comparing the unserved energy and hours of unserved energy between the Option 2 and Option 3 scenarios is not recommended. The Option 2 scenarios are working to service the Municipal load during hours of load shedding; and the Option 3 scenarios are working to provide a constant reduction over an extended period, to meet load curtailment requirements.

A useful presentation of the effect on hours of load shedding reduction and the percentage of unserved energy for different sizes of BESS. is presented in **Figure 4-32** The graph shows that for the same size of BESS, there is a significantly lower amount of unserved energy if the BESS is used for loadshedding reduction (2A) as opposed to being used for load curtailment (3A). The curtailment solution has a much higher quantum of hours of loadshedding and, if it is to be successful in meeting the Curtailment Baseload requirements over longer periods of time, it will need to be done in conjunction with other load curtailment initiatives.

In conclusion, the results suggest that BESS, even at a smaller size of 10/20MWh will have an impact on loadshedding, and if the Municipality had to procure a smaller size BESS, they would still benefit from improved security of supply, as well as improved production of renewable energy, if the BESS is coupled with a solar PV plant which will not go offline during load shedding.

4.9.2.2 Summary conclusion on the financial assessment

Based on the analysis results shown in **Table 4-25** below; the following main observations and comments are made:

In respect of the NPV assessment

- Options 1A and 1B achieve the highest savings under the current Megaflex tariff structure (R395/MWh and R393/MWh respectively); and remain positive under the proposed MunicFlex tariff structure and a 10% tariff flex;
- Option 1C achieves second highest savings (R355 /MWh); and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex;
- Options 2A, 2B, 3A, and 3B are loss-making over the duration of the PPA period under the current Megaflex, and proposed MunicFlex tariff structures
- (Note: running Option 2A under a no-loadshedding scenario (more efficient battery utilisation and using Megaflex tariff structure) still result in a negative NPV savings value, albeit smaller (-R5/MWh).)
- Option 2A10S provides savings under the current Megaflex tariff structure (R321/MWh); and remains positive under the proposed MunicFlex tariff structure and a 10% tariff flex. A further sensitivity was run for this option to ascertain the outcome under a no loadshedding scenario (as Option 2A10S NLS), the latter which provided savings under the current Megaflex (R293/MWh)- and MunicFlex (R152/MWh) tariff structures.
- Finally, avoided diesel cost shown in Table 3-10 are immaterial in the context of losses associated with large batteries. However, reduced avoided cost does strengthen the business case for a smaller battery option (e.g. 2A10S).

In respect of the impact on cost of supply

- average cost of supply reduces between 16c/kWh to 19c/kWh for variations of Options 1; while cost of supply increases between 11c/kWh to 40c/kWh for variations of Option 2 and Option 3 (with the exception of a 10c/kWh saving for both 2A10S and 2A10 NLS) ;
- the introduction of MunicFlex reduces overall savings of renewable energy, which accentuates savings and losses mentioned above.

Other considerations

- It is important to note that higher Eskom tariff increases in comparison to CPI linked IPP tariff increases will see a growing gap between the average utility- and IPP tariffs; and therefore, have to be considered together with NPV savings.
- Stellenbosch Municipality indicated that above inflation energy tariff increases are not affordable for the average household; hence, technology solutions that increase the current cost of supply would probably be less favourable.
- The MunicFlex rate adjustment is a key consideration for the calculation of the cost of supply.

Conclusion

Based on the outcome of the technical and financial analysis, it can be seen that an embedded solar PV plant without BESS provides the optimal financial impact, however it does not contribute to reducing unserved energy. It is noted that the large batteries (e.g. Options 2A/B and 3A/B) required for significant loadshedding reduction are not economical (with due consideration of the profit benefit associated with lower unserved energy), given low utilisation levels (batteries substantially used for dispatch during load-shedding) and high capex cost. Options 2A, 2A NLS, 2B, 3A and 3B are not affordable based on preliminary discussions with the Municipality Finance Department.

A smaller battery as modelled in Option 2A10S can provide savings, as well as some contribution to reducing unserved energy. It also provides savings under a no-loadshedding scenario.

Table 4-25 Summary outcome of the technical and financial analysis undertaken

Evaluation of Options	Option 1 (Solar PV Only)			Option 2 (Solar + BESS)			Option 2 (Solar + Small BESS)		Option 3 (Solar + BESS)	
Criteria	Imbedded	Imbedded	Wheeled	Loadshedding	Loadshedding	No Loadshedding	Loadshedding	No Loadshedding	Load Curtailement	Load Curtailement
	1A	1B	1C	2A	2B	2A NLS	2A10S	2A10S NLS	3A	3B
Technical outputs										
PV Size (MWp)	34.2MWp (S) + 8.7MWp (C) + 7.9MWp (F) + 1.4MWp (P) = 52.1 MWp total	55MWp	52.1 MWp	47.6MWp (S) + 11.6MWp (C) + 9.7MWp (F) + 1.8MWp (P) = 70.7MWp total	71.3MWp	71.3MWp	47.6MWp	47.6MWp	37.5MWp (S) + 13.1MWp (C) + 10.7MWp (F) + 1.8MWp (P) = 63.1MWp total	66.6MWp
BESS Size (MW/MWh)	No BESS	No BESS	No BESS	50/100 (S) + 15/30 (C) + 10/20 (F) + 2/4 (P) = 77/154 total	55/110	55/110	5/10	5/10	25/100 (S) + 7.5/30 (C) + 5/20 (F) + 1/4 (P) = 38.5/154 total	37.5/150
Substation	All	All	All	All	All	Stellenbosch	Stellenbosch	Stellenbosch	All	All
% PV Curtailment	10%	10%	6.3%	10%	10%	9.9%	10%	9.7%	10%	10%
% Unserved Energy	7.8%	7.8%	7.8%	0.09%	0.23%	n/a	3.93%	n/a	1.91%	1.57%
% Reduction of eskom consumption	28%	31%	32%	39%	43%	44%	39%	39%	34%	36%
Financial Considerations										
Sizing considered in Financial Model	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing	Appropriate Sizing Considered; Tariff Based on Commercial Scale Project Costing
Energy Sold (MWh/annum)	351 211	351 211	351 211	380 237	380 004	380 790	361 235	380 790	373 529	374 805
Total Generation (MWh/Annum)	120 335	127 131	128 183	176 294	142 615	123 590	111 026	111 026	144 394	150 812
2023/24 Cost of Supply (R/kWh)	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
2023/24 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.75	1.75	1.75	1.74	1.74	1.74	1.75	1.74	1.74	1.73
2024/25 Cost of Supply (Drakenstein Replaced) (R/kWh)	1.98	1.98	1.97	1.96	1.96	1.96	1.97	1.96	1.96	1.95
2024/25 IPP Cost of Supply (R/kWh)	0.95	0.95	0.90	2.16	2.31	2.31	1.19	1.22	2.62	2.37
2024/25 Blended Cost of Supply IPP & Eskom (R/kWh)	1.79	1.79	1.82	2.26	2.23	2.07	1.87	1.85	2.36	2.26
2024/25 (Reduction)/Increase (c/kWh)	(19)	(19)	(16)	30	27	11	(10)	(11)	40	31
2024/25 NPV Savings - Current Tariff Structure (R/MWh)	395	393	355	(150)	(149)	(-5)	321	293	(368)	(211)
Debt Ratio (36 month guarantee)**	48.0%	49.0%	48.0%	83.0%	77.0%	70.0%	50.0%	51.0%	83.0%	80.0%
Debt Ratio (12 month guarantee)**	37.6%	37.9%	37.7%	48.8%	46.7%	44.8%	38.4%	38.5%	48.7%	47.8%
2024/25 Municflex (Cost of Supply-Drakenstein Excl)	1.94	1.94	1.94	1.90	1.90	1.90	1.92	1.90	1.91	1.90
2024/25 MunicFlex Blended Cost of Supply IPP & Eskom (R/kWh)	1.86	1.86	1.89	2.34	2.29	2.14	1.92	1.89	2.43	2.34
2024/25 MunicFlex (Reduction)/Increase (c/kWh)	(8)	(8)	(5)	44	39	24	-	(1)	52	44
NPV Savings - Proposed MunicFlex (R/MWh)	257	249	166	(284)	(291)	-	192	152	(503)	(359)

*36 months future IPP revenue buyer default termination guarantee

** norm: 45%

4.9.3 MEASUREMENT OF THE OPTIONS AGAINST THE MUNICIPALITY'S STRATEGIC OBJECTIVES

The Municipality's strategic objectives and related output specifications are detailed in **Section 3.7**, and Table 4-26 below summarises the strategic objectives and consideration is given as to how the options meet these objectives. The assessment looked broadly at Options 1, 2 and 3 as well as hybrid Option 2A10S (with a smaller BESS solution).

All options contribute to strategic objectives 1 and 2. From the table one can see that no one option meets all the objectives and the balance falls between reducing unserved energy vs impact on cost of supply. As stated in the technical and financial assessment Option 1 provides the most optimal financial impact, however it does not contribute to reducing unserved energy. Options 2A/B and 3A/B reduces the percentage of unserved energy, however the financial impact may not be palatable to the Municipality. Option 2A10S provides a middle ground solution as it contributes to reducing unserved energy and do not have a negative impact on cost of supply.

Table 4-26 Assessment of the Options Against the Municipal Strategic Objectives

Municipal Strategic Objectives		Option 1 A,B and C Solar PV plant only	Option 2A+B Solar PV plant + BESS Loadshedding	Option 3A+B Solar PV plant + BESS Load Curtailment	Option 2A10S Solar PV plant + BESS Reduced size
1	Combat climate change and reduce carbon emissions	All the proposed options contribute towards combatting climate change and reducing carbon emissions.			
2	Diversification - Meeting IDP target of procuring electricity from IPPs - 30% by 2027	The maximum contracted capacity determined for the Project will achieve this objective.			
3	Reliable Energy Supply - reduction unserved energy as result of load shedding	This option does not contribute to reducing unserved energy	Based on the sizing Option 2 offers greatest impact on reducing unserved energy	Reduction in unserved energy, however not as much as Option 2	Some reduction in unserved energy (from 7% to 3.9%)
4	Affordability - in respect of Municipality's Balance Sheet	Lower bound guarantee requirements within balance sheet debt limits	This option based on discussions with the Municipality does not appear to be affordable.	This option based on discussions with the Municipality does not appear to be affordable.	Lower bound guarantee requirements within balance sheet debt limits
5	Affordability - in respect of impact on cost of supply and end-user tariff	Financial assessment outcome shows positive impact on Municipal Cost of Supply NPV saving R/MWh: ranging from R307 for Option 1C to R395 for Option 1A.			Financial assessment outcome shows positive impact on Municipal Cost of Supply NPV saving R/MWh: R192
6	Value for Money - Transferring substantial risk to private party, competitive procurement process	By virtue of procuring power under a competitive procurement process and through structuring the PPA risk allocation appropriately, the Municipality's risk is minimised to mainly the payment obligation (including providing a termination payment guarantee in the event of termination due to Municipality default) and dispatch of the IPP plant.			

4.10 RECOMMENDED TECHNICAL SOLUTION OPTION(S)

Based on the outcome of the comparative analysis of the Technical Solution Options identified **Table 4-27** summarises the recommendation.

Table 4-27 Recommend Technical Solution option(s)

Option 1 A/B/C Solar PV plant only	Option 2A/B Solar PV plant + BESS Loadshedding	Option 3A/B Solar PV plant + BESS Load Curtailment	Option 2A10S Solar PV plant + BESS Reduced size
Option Recommended?			
YES	NO	NO	YES
Presents a no-regret option from a financial point of view and results in the highest NPV saving. The option however does not contribute to reducing unserved energy.	Contributes to reducing the % of unserved energy, however estimated to increase the blended cost of supply and would place a strain on the Municipality's Balance Sheet.	Contributes to reducing the % of unserved energy, however estimated to increase the blended cost of supply and would place a strain on the Municipality's Balance Sheet.	This presents a middle ground in respect of reducing unserved energy from 7.8% to 3.93% and also results in a NPV saving, albeit lower than Option 1A/B/C.

The Municipality's view of loadshedding in the medium to long term should be considered in deciding whether to pursue Option 1A/B/C vs Option 2A10S. A battery solution can be added to Option 1A/B/C at a later stage if necessary. **The Municipality should make a decision on the preferred technical solution to be procured and provide their approval for the TA Team to continue with the procurement phase on this basis.**

4.11 CONSIDERATION OF THE LOAD SHEDDING FORECAST

4.11.1 BACKGROUND

The Municipal Council Meeting minutes indicate the objective of the Municipality to commence with the investigation to generate at least sufficient electricity such that load shedding up to Level 2 will have no impact on the business of Stellenbosch consumers.

There is no doubt that loadshedding as experienced over the last number of years had a significant negative impact on the economy. For this feasibility study we elected to use the 2022 year as the base load shedding assumption. Although predicting the future with absolute certainty is impossible there is good reason to believe that the extreme load shedding experienced during 2023 is not representative of the future and that the long-term loadshedding trend should be improving and therefore using 2022 as a base case can be considered a conservative assumption.

4.11.2 NATIONAL ENERGY BALANCE MODEL

Cresco created a forward-looking bottom-up assessment of South Africa's national energy balance and the resulting load shedding outlook for South Africa. Load shedding and load curtailment outlooks were created for 3 scenarios (i.e. base, pessimistic, optimistic) using Cresco's Excel-based National Energy Balance Model (Energy Balance Model). The model was initially developed in 2023 and thoroughly updated in the first quarter of 2024.

The structure of the Energy Balance Model is detailed in **Figure 4-37**.

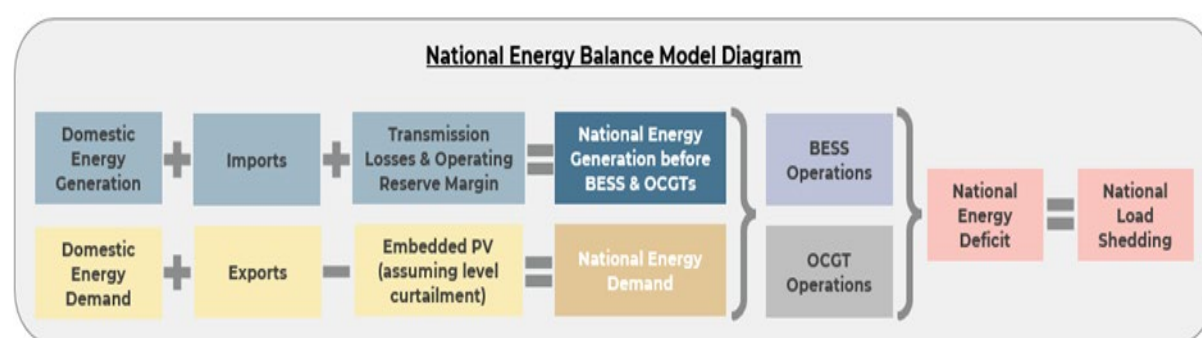


Figure 4-37 National Energy Balance Model structure

Based on this analysis, the Energy Balance Model indicates that loadshedding is projected to be at a maximum of Stage 2 by the earliest date this project can realistically be implemented (2027) and by 2030 very intermittently as indicated in **Figure 4-38** and **Figure 4-39** for the years 2031 to 2035.

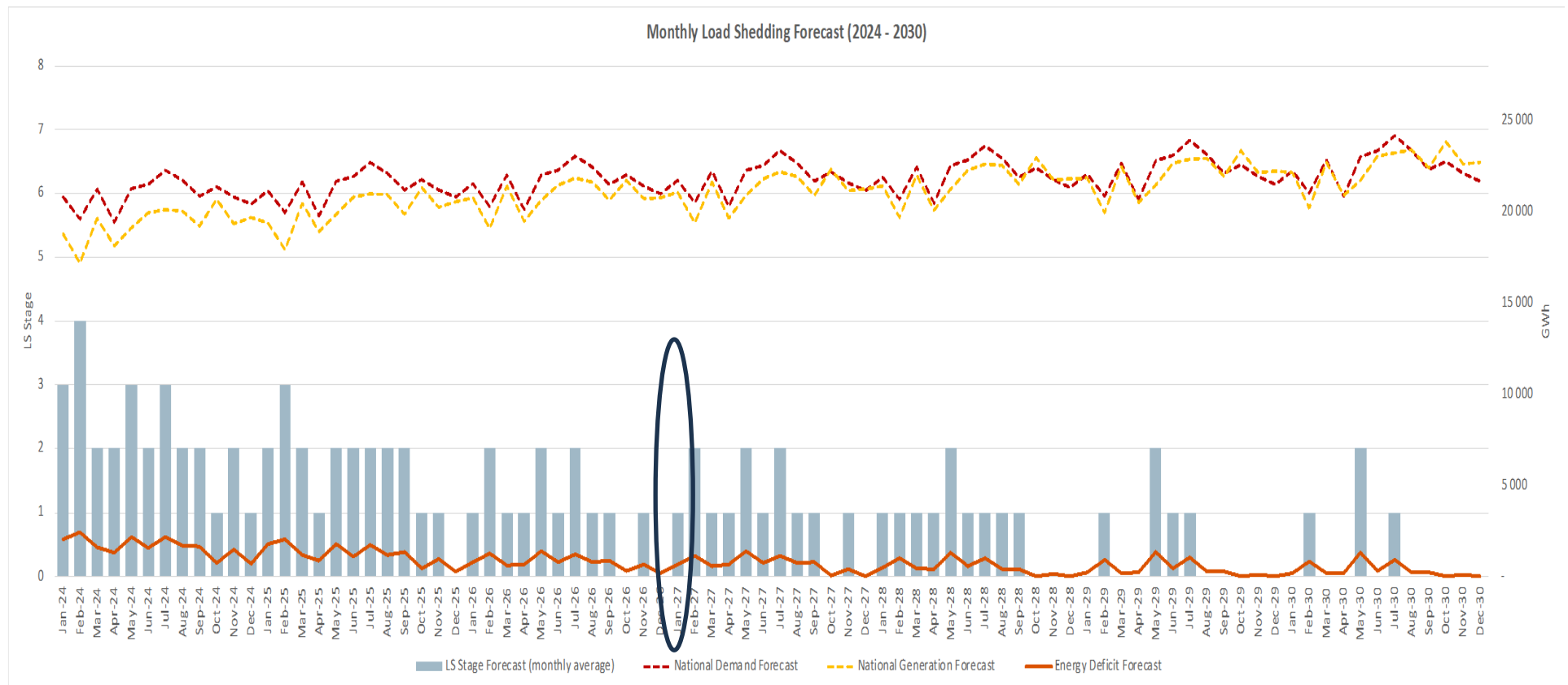


Figure 4-38 Monthly Load Shedding Forecast (2024 – 2030)

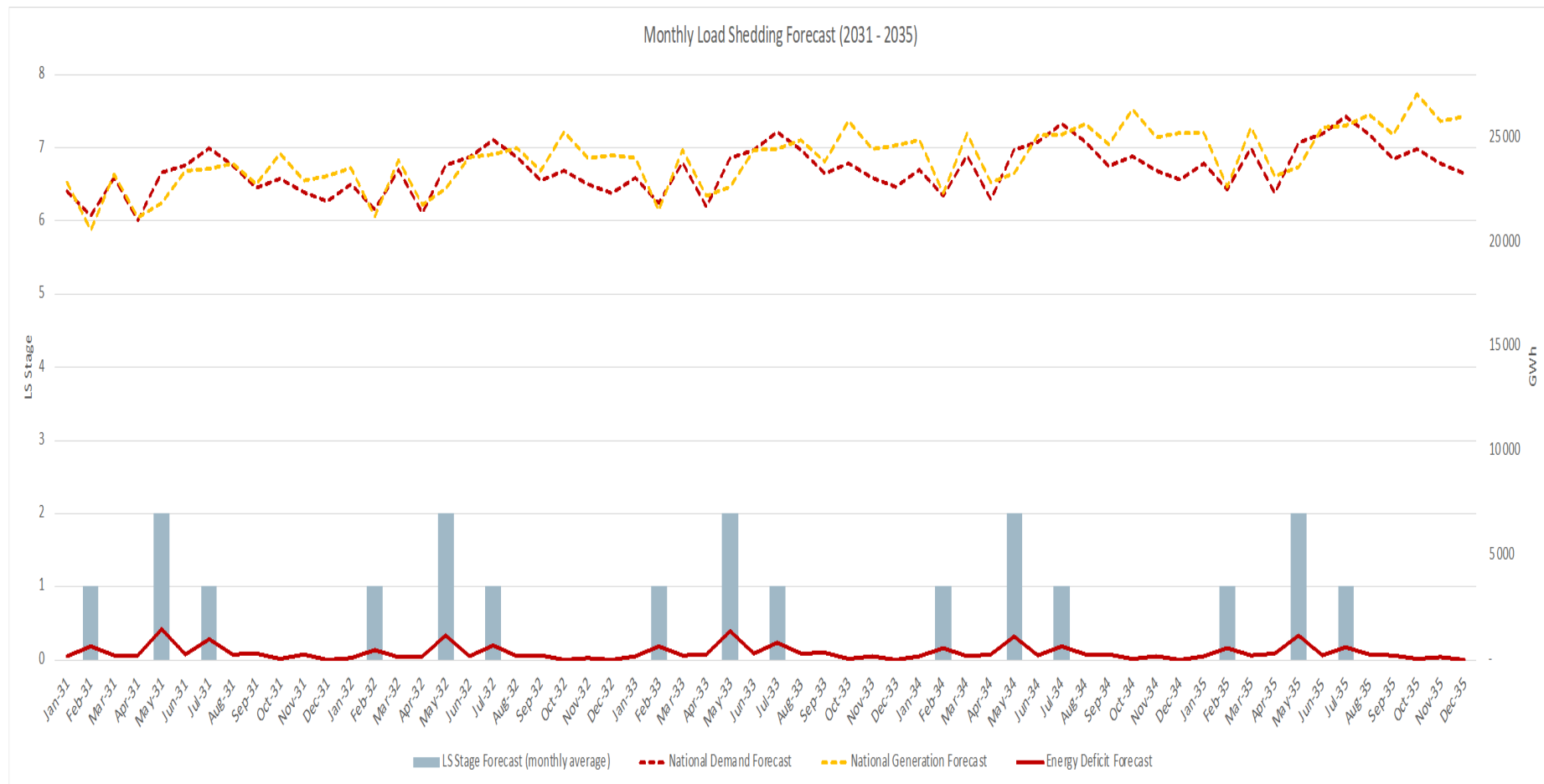


Figure 4-39 Monthly Load Shedding Forecast (2031 – 2035)

4.11.3 KEY DRIVERS OF IMPROVED LOAD SHEDDING

By 2028 load shedding is projected to be largely limited to non-business hours and improving. Very little loadshedding is expected during core business hours which should limit the direct economic impact of loadshedding when compared to long periods of daytime unserved energy as depicted in **Table 4-28** overleaf for 2028 to 2035.

The main drivers of the projected improvement are:

- Improvement in Eskom's Energy Availability Factor (EAF). EAF is an important metric that tracks the performance of Eskom's power plants. It represents the ratio of actual available energy to the maximum possible energy that could be generated. Eskom's performance is influenced by various factors, including maintenance, fuel availability, and external conditions. Monitoring Eskom's EAF helps track overall wellbeing of SA's grid and improvements of it (if any). Starting from 2019, Eskom's EAFs have been steadily deteriorating from average 70% in 2019 to 54% in 2023, indicating increased risk of unplanned failures and decreased reliability and performance of Eskom's power plants. There are however early indications that this trend is starting to reverse. This is driven by multiple interventions and new generating units starting to contribute to the fleet.

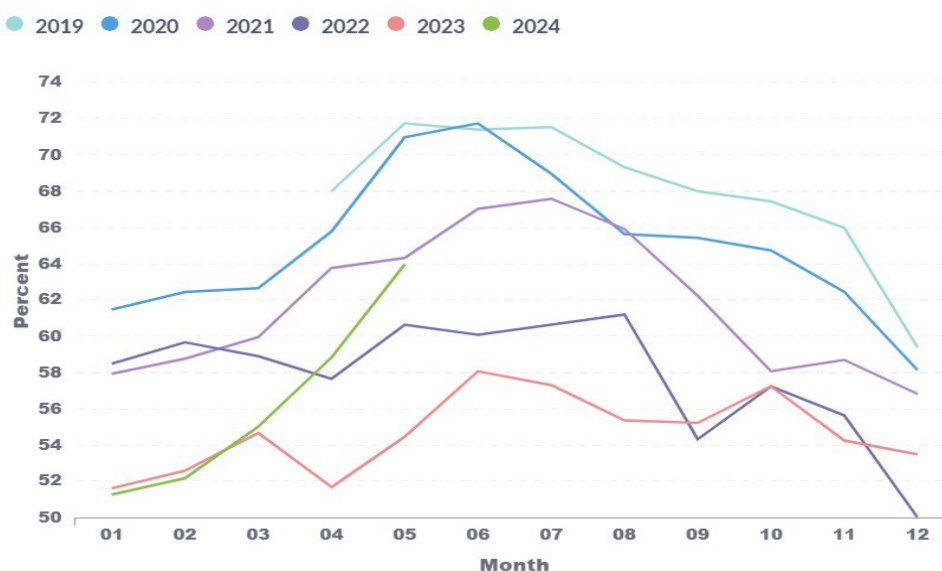


Figure 4-40 Eskom Energy Availability Factor by Year

(Source Unofficial Eskom Data Portal)

- Additional renewable energy generation from the private sector and the REIPPPP.
- Addition of gas-fired power to the generation fleet in later years of the forecast period.

Table 4-28 Projected Load Shedding (Hourly per Month – 2028 to 2035)

	2030												2035											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0	-	(1 076)	-	-	(231)	-	-	-	-	-	-	-	-	-	(23)	-	(1 190)	-	-	-	-	-	-	-
1	-	(1 028)	-	-	-	-	-	-	-	-	-	-	-	(1 766)	(12)	-	(824)	-	-	-	-	-	-	-
2	-	(1 061)	-	-	-	-	-	-	-	-	-	-	-	(1 877)	(71)	-	(685)	-	-	-	-	-	-	-
3	(219)	(1 248)	-	-	-	-	-	-	-	-	-	-	-	(2 133)	(174)	-	(726)	-	-	-	-	-	(396)	-
4	(928)	(2 087)	(256)	-	(585)	-	-	-	-	-	(574)	-	(1 027)	(3 108)	(1 067)	(436)	(1 513)	-	-	-	(353)	-	(1 483)	-
5	(2 012)	(3 690)	(1 713)	(736)	(2 045)	-	(635)	(539)	(1 683)	(257)	(1 984)	-	(2 833)	(4 909)	(2 711)	(1 651)	(3 123)	-	(1 158)	(1 027)	(2 410)	(1 061)	(3 020)	(70)
6	(1 533)	(4 044)	(2 382)	(1 717)	(3 451)	(221)	(1 342)	(1 440)	(2 724)	-	(275)	-	(1 625)	(5 081)	(3 386)	(2 724)	(4 664)	(480)	(1 951)	(2 012)	(3 435)	-	-	-
7	-	(1 379)	(372)	(440)	(3 285)	(658)	(2 226)	(849)	-	-	-	-	-	(225)	-	(274)	(4 024)	(728)	(2 747)	(729)	-	-	-	-
8	-	-	-	-	-	-	(47)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	(5 454)	-	(270)	-	-	-	-	-	-	-	-	-	(35)	-	-	-	-	-	-	-
18	-	-	-	-	(8 075)	(190)	(6 784)	-	-	-	-	-	-	-	-	-	(2 025)	-	(360)	-	-	-	-	-
19	-	(3 502)	-	-	(6 975)	(2 173)	(6 631)	-	-	-	-	-	-	-	-	-	(1 060)	-	(149)	-	-	-	-	-
20	-	(4 148)	-	-	(5 706)	(4 207)	(5 826)	(1 107)	-	-	-	-	-	-	-	-	(7 306)	(2 775)	(5 099)	-	-	-	-	-
21	-	(3 118)	(838)	(1 952)	(3 852)	(2 299)	(4 025)	(2 663)	(2 304)	-	-	-	-	-	-	(2 887)	(5 279)	(2 999)	(5 154)	(3 445)	-	-	-	-
22	(1 142)	(2 149)	(423)	(666)	(1 990)	(131)	(1 804)	(820)	(897)	-	-	-	-	-	-	(1 546)	(3 235)	(569)	(2 684)	(1 430)	(1 362)	-	-	-
23	(368)	(1 317)	-	-	(789)	-	(223)	-	-	-	-	-	-	(1 881)	-	(460)	(1 881)	-	(856)	-	(38)	-	-	-
Average	(258)	(1 244)	(249)	(230)	(1 768)	(412)	(1 242)	(309)	(317)	(11)	(118)	-	(229)	(874)	(310)	(416)	(1 565)	(315)	(840)	(360)	(317)	(44)	(204)	(3)

	2028												2029											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
0	(1 190)	(1 046)	-	-	-	-	-	-	-	-	-	-	(133)	(1 093)	-	-	(77)	-	-	-	-	-	-	-
1	(28)	(941)	-	-	-	-	-	-	-	-	-	-	(1)	(1 015)	-	-	-	-	-	-	-	-	-	-
2	(11)	(921)	-	-	-	-	-	-	-	-	-	-	(14)	(1 021)	-	-	-	-	-	-	-	-	-	-
3	(1 86)	(1 070)	-	-	-	-	-	-	-	-	-	-	(218)	(1 189)	-	-	-	-	-	-	-	-	-	-
4	(8 27)	(1 848)	(148)	-	(318)	-	-	-	-	-	(484)	-	(892)	(1 997)	(88)	-	(440)	-	-	-	-	-	(548)	-
5	(1 851)	(3 381)	(1 535)	(510)	(1 730)	-	(277)	(291)	(1 439)	(145)	(1 876)	-	(1 946)	(3 567)	(1 514)	(5 87)	(1 875)	-	(510)	(453)	(1 633)	(159)	(1 963)	-
6	(1 598)	(3 783)	(2 206)	(1 472)	(3 101)	-	(959)	(1 174)	(2 532)	-	(688)	-	(1 526)	(3 925)	(2 181)	(1 560)	(3 265)	(92)	(1 209)	(1 348)	(2 705)	-	(558)	-
7	-	(1 794)	(748)	(788)	(3 180)	(456)	(1 914)	(943)	(662)	-	-	-	-	(1 456)	(341)	(5 86)	(3 224)	(586)	(2 133)	(942)	(407)	-	-	-
8	-	-	-	-	(975)	-	(668)	-	-	-	-	-	-	-	-	-	(485)	-	(426)	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	(2 090)	-	(1 312)	-	-	-	-	-	-	-	-	-	(1 634)	-	-	-	-	-	-	-
17	-	(942)	-	-	(6 096)	(2 873)	(4 800)	-	-	-	-	-	-	-	-	-	(6 300)	-	(5 100)	-	-	-	-	-
18	-	(3 483)	(933)	(1 091)	(7 470)	(5 032)	(6 052)	(563)	(385)	-	-	-	-	(1 125)	-	(61)	(7 766)	(2 810)	(6 482)	(1)	-	-	-	-
19	(3 490)	(5 002)	(3 354)	(4 076)	(6 416)	(4 673)	(5 918)	(3 451)	(2 508)	-	-	-	-	(4 863)	-	-	(6 689)	(5 032)	(6 341)	-	-	-	-	-
20	(3 318)	(4 470)	(2 757)	(3 092)	(5 180)	(3 637)	(5 168)	(3 734)	(3 356)	-	-	-	-	(4 351)	-	(1 585)	(5 438)	(3 957)	(5 563)	(2 504)	(1 074)	-	-	-
21	(2 469)	(3 348)	(1 654)	(1 733)	(3 376)	(1 818)	(3 446)	(2 318)	(2 177)	-	(1 207)	-	-	(865)	(3 273)	(1 359)	(1 801)	(3 610)	(2 094)	(3 801)	(2 306)	-	-	-
22	(1 475)	(2 271)	(593)	(462)	(1 573)	-	(1 306)	(518)	(740)	-	(615)	-	(1 328)	(2 245)	(353)	(5 25)	(1 776)	-	(1 614)	(707)	(874)	-	(494)	-
23	(5 92)	(1 360)	-	-	(430)	-	-	-	-	-	-	-	(498)	(1 371)	-	-	(605)	-	(80)	-	-	-	-	-
Average	(668)	(1 486)	(580)	(551)	(1 747)	(770)	(1 326)	(541)	(575)	(6)	(203)	-	(309)	(1 354)	(243)	(2 79)	(1 799)	(607)	(1 386)	(354)	(375)	(7)	(148)	-

5. LEGAL ASSESSMENT

5.1 LEGAL AND REGULATORY FRAMEWORK

In this legal assessment, we address the key legal and regulatory questions which the Project raises in relation to feasibility. The purposes of this legal assessment are:

- to determine which legislation and regulations are applicable to the Project;
- to assess whether the requirements of applicable legislation and regulations present any major obstacles to Project procurement and implementation, or if not any material risks to successful completion of the Projects; and
- to identify key approvals, procedures and other requirements which impact on the planning, procurement and implementation of the Project, so that those can be taken account of in the Project procurement and contracting process.

A summary of relevant provisions in each of the key legal instruments that comprise the legal and regulatory framework within which the Project must be designed and implemented, including primary legislation and the regulations and other instruments issued in terms thereof, is set out at **Annexure B**. These statutes and regulatory instruments include the following:

- The Constitution of the Republic of South Africa, 1996
- Electricity Regulation Act, No. 4 of 2006
- Electricity Regulations on New Generation Capacity, 2011
- The Integrated Resource Plan, 2019 (and draft IRP, 2024)
- Local Government: Municipal Systems Act, No. 32 of 2000
- Local Government: Municipal Finance Management Act, No. 56 of 2003
- The Municipal Public-Private Partnership Regulations, 2005
- Municipal Supply Chain Management Regulations, 2005
- NRS 048-9 and South African Grid Codes.

In **Annexure C**, we have also set out in some detail a description of the environmental and land-related considerations that apply to the Project.

Although it will largely be the responsibility of bidders to know the requirements of and obtain the various authorisations, permits, consents and other rights and entitlements referred to in those sections of **Annexure C**, it is necessary for the Municipality to understand the regulatory requirements which bidders will be subject to, firstly for purposes of determining the eligibility and evaluation criteria that will be applied and secondly to ensure that the procurement process allows prospective bidders sufficient time to obtain the necessary authorisations and permits, at the appropriate stage of that process.

Legislation and regulations giving effect to sections 217(2) and (3) of the Constitution which relates to preferential procurement, is dealt with in **section 6** of this feasibility study report. These legal instruments include the following:

- Preferential Procurement Policy Framework Act No. 5 of 2000
- Preferential Procurement Regulations, 2022
- B-BBEE Act, 2003
- B-BBEE codes of good practice (as applicable).

5.2 SUMMARY OF LEGAL CONCLUSIONS

Briefly summarised, the more detailed explanation and analysis of the applicable legal and regulatory framework set out in paragraph [5.2] below concludes as follows:

- The procurement of electricity by the Municipality from one or more IPPs does not entail the delivery of “municipal services” through an external mechanism, as contemplated in the Systems Act. Therefore, the requirements set out at section 76 of the Systems Act and in the following sections are not applicable to the Project.
- If the Project is designed so that the Municipality only purchases electricity (and possibly services which are ancillary thereto) from IPPs which bid for the opportunity to establish a new generation capacity project for purposes of sale of electricity (and possibly ancillary services) to the Municipality for the term of the PPA, the Project will not constitute a PPP. The key reason for this conclusion is that the IPPs in this scenario will not be performing municipal functions on behalf of the Municipality. As such, the Project is not a PPP and section 120 of the MFMA, read with the Municipal PPP Regulations, is not applicable to the Project.
- Even if one or more IPP generation facilities were situated on Municipal-owned land, that would not automatically make the Project a PPP. Only if the Municipality requires such generation facilities to be located on specific Municipal-owned land, and requires the generation facility to be constructed, funded, commissioned and operated for the Municipality, is there a possibility that the Project would be considered a PPP. This is not the case, therefore the PPP Regulations do not apply.
- Although the PPP Regulations are not applicable, relevant sections of the MFMA and the Municipal SCM Regulations are applicable to the procurement. In addition, the Municipality's SCM Policy and its Preferential Procurement Policy will be applicable.
- It is not a necessary pre-condition for the Project to proceed, for the Municipality to procure a Ministerial determination in terms of section 34 of ERA, to cover the new generation capacity that will be established through the Project. The Municipality can initiate the Project and procure the new generation capacity on its own initiative, and in our view, it

should do this, subject to the outcomes of its stakeholder engagement plan which will test the extent, if any, of objections or concerns regarding this approach.

- As long as the Project is procured on the Municipality's own initiative and not pursuant to a section 34 Ministerial determination, the NewGen Regulations issued in terms of ERA are not applicable to the Project. The reason for this conclusion is that "new generation capacity" in the NewGen Regulations is defined as generation capacity procured pursuant to a section 34 determination.
- National Treasury Circular 118 was issued to give guidance to municipalities on the interpretation and consequences of the NewGen Regulations, where applicable to municipal IPP procurement. Circular 118 is not directly applicable to the Project or binding on the Municipality, but provides useful guidance on best practice in municipal IPP procurement. To date, the steps taken by the Municipality in relation to the Project are consistent with the preparatory steps outlined in Circular 118, for projects that fall within Scenario 2.
- Based on the current Schedule 2 of ERA, it appears that IPPs which are successful in the Municipality's Project procurement process will not require a generation licence issued by NERSA. Depending on where the generation facilities are located, they will be exempt from both licensing and registration by NERSA under item 2 of Schedule 2, or exempt from licensing but required to register under item 3 of Schedule 2 of ERA.
- Because the IPP generation facilities will not have to be licensed by NERSA under ERA, it will not be necessary for the Municipality to obtain Ministerial approval in terms of section 10(2)(g) of ERA, for purposes of facilitating the issue of generation licences by NERSA.
- The contracts which result from the Project procurement process will result in long-term financial commitments on the part of the Municipality. Therefore, Municipal Council approval will be required in terms of section 33 of the MFMA. Section 33 approval should be sought towards the end of the procurement process, when the PPAs and associated agreements are in near-final form.
- It will be prudent, and has become best practice in IPP procurement processes, to issue largely non-negotiable draft agreements along with the RFP, for purposes of indicating to prospective bidders what the intended commercial terms of the transaction will be, and the respective risk allocation between the parties. The draft agreements will also, to the extent relevant, include any socio-economic development obligations imposed as contract terms by the Municipality.
- There are no regulatory restrictions in the NRS 048-9, the Municipality's Distribution Licence, or the Electricity Supply Agreements, that would require consultation with or permission from Eskom for the establishment of an embedded generation facility in the Municipality's licensed area. However, it should be noted that embedded generators connected to the distribution system will still have to comply with the specifications and obligations set out in the various distribution Grid Codes.

- Furthermore, Eskom as the System Operator has the ultimate responsibility for overall system stability, and is empowered to take appropriate measures in an emergency to mitigate any risk to grid stability.
- In order for a generator to be grid tied to the IPS, as contemplated in Option 1C which envisages one solar PV plant connected anywhere on the IPS, an application for grid connection will have to be made in accordance with the applicable grid capacity allocation process. However, if the embedded generation facility is connected to the Municipality's distribution system, then an application for a grid connection should be made to the Municipality. There is no indication in the applicable regulations that an approved grid connection application is transferable, therefore it should not be assumed that the Municipality could transfer a grid capacity allocation made by Eskom / NTC for the Municipality to an IPP at a later stage.
- The applicable Grid Code for Battery Energy Storage Facilities (BESF) does not place any restrictions on embedded generation projects, but any generation facilities which include BESS will have to comply with the technical specifications of the BESF Grid Connection Code, should the technical option chosen for the Project include a BESS component.
- If the preferred technical option entails the Municipality becoming a load curtailment customer, then NRS 048-9 will have to be complied with in terms of the requirements relating to: eligibility for becoming a load curtailment customer; the application process to be followed by the Municipality; and the technical specifications that must be met.
- The legal landscape surrounding the approval of project pricing for IPPs and the regulation of fees, charges, and tariffs by the NERSA is multifaceted and subject to ongoing developments. While IPPs exempted from licensing under the ERA will not be subject to NERSA approval for PPA pricing, the Municipality is required to obtain NERSA approval on an annual basis of its tariffs for municipal services, including electricity. Recent legal developments underscore the necessity for a cost-effective methodology in tariff approval processes.

5.3 KEY LEGAL AND REGULATORY CONSIDERATIONS

In the sections that follow, we address the key legal and regulatory questions that arise in relation to the feasibility phase of the Project. These questions are designed to identify legal requirements which bind or affect the Municipality, both in regard to the procurement phase and thereafter, during contract finalisation, and the consequences of those requirements for the Project design and the timing / sequencing of the process.

These questions are not comprehensive but have been identified as critical to the legal assessment at feasibility stage. References to legislation are to provisions that are summarised in more detail in **Annexure B**.

In addition to the above, consideration is given in some of the questions addressed below as to the regulatory requirements that will be applicable to bidders in the competitive bidding process which the Municipality will conduct for purposes of selection of successful bidders which will implement the Project.

5.3.1 DOES THE PROJECT INVOLVE THE PROVISION OF MUNICIPAL SERVICES?

The importance of this question is that if the Project involves the provision of municipal services, the requirements of Part 2 of Chapter 8 of the Systems Act are triggered (sections 76 to 81) and the processes and approval requirements set out in those sections of the Systems Act would have to be adhered to.

The key requirements of these provisions of the Systems Act are described in **Annexure B**, but essentially, Chapter 8 of the Systems Act regulates the considerations that must be applied when a municipality decides how to deliver “municipal services” to the local community. If an external service delivery mechanism is being considered by a municipality, a cost-benefit and capacity analysis, consultation with organised labour, a public participation process, an assessment of all possible appropriate internal and external service delivery mechanisms and a full feasibility study needs to be undertaken, before a decision is taken as to the appropriate external mechanism. Thereafter the municipality must establish a programme for community consultation on the service delivery mechanism and preparation of and consultation on the proposed service delivery agreement. Thereafter the service provider would have to be selected through a lawful procurement process, and other approvals such as council approval in terms of section 33 of the MFMA may be required.

As stated above, Chapter 8 of the Systems Act regulates municipal service delivery, and in so doing defines the term “*municipal service*” to mean “*a service that a municipality in terms of its powers and functions provides or may provide to or for the benefit of the local community...*”.

Therefore, the starting point is that in order to constitute a municipal service, the service in question must be one which a municipality is empowered to provide in terms of its powers and functions. In relation to electricity, Part B of Schedule 4 of the Constitution provides that “*electricity and gas reticulation*” is a municipal functional area of competence.

The ERA defines ‘reticulation’ as “*trading or distribution of electricity and includes services associated therewith*”. The Project scenario – generation of electricity by IPPs for purchase by the Municipality - is not concerned with the selling of electricity by those IPPs to customers of the Municipality, or the distribution of electricity by those IPPs to such customers, but rather the generation by them of electricity, which is then sold to the Municipality.

According to section 76 of the Systems Act, a municipality may provide a municipal service in its area or a part of its area through (a) an internal mechanism, or (b) an external mechanism

by entering into a service delivery agreement with any of the third parties listed in this provision.

On a plain reading of section 76(b) of the Systems Act,²¹ it is clear that the provision of municipal services through an external mechanism involves the municipality and a third party (including a municipal entity, another municipality, an organ of state, a community organisation or any other institution, entity or person legally competent to operate a business activity) entering into a service delivery agreement, in terms of which the third party provides services which are ordinarily provided or to be provided by the municipality, directly to the residents of such municipality.

By way of example, if a municipality entered into an agreement with an IPP for such IPP to supply electricity directly to the residents of the municipality, such agreement would constitute a service delivery agreement, and would be subject to section 76 of the Systems Act and the consequential provisions.

In the Project scenario, however, it is envisaged that the electricity will be generated by the IPP, for the IPP to then sell the electricity to the Municipality. The Municipality will retain responsibility for the supply of electricity to the residents of the Municipality.

In a scenario where a municipality purchases electricity produced by an IPP (or Eskom, for that matter), and then reticulates (distributes) the electricity to customers in its area of jurisdiction, our view is that the arrangement between the municipality and the IPP is not an arrangement for the provision of municipal services, but rather the acquisition (purchase) of electricity for purposes of the municipality carrying out the service of performing its reticulation function, in respect of electricity supply to end users and customers. The generation of electricity by the IPPs is a separate activity, and the sale thereof to the municipality *enhances* the municipality's ability to provide reticulation services to or for the benefit of the community.

In *Joseph*, the Constitutional Court made the following remarks in relation to the provision of electricity –

"The provision of basic municipal services is a cardinal function, if not the most important function, of every municipal government. The central mandate of local government is to develop a service delivery capacity in order to meet the basic needs

²¹²¹ The "plain" meaning refers to a judgment that whatever the text conveys in context, is clear from the text. Thus, a term's ordinary meaning is also its plain meaning only when it is clear from how the term is used in the statute that its context is ordinary as opposed to technical.

of all inhabitants of South Africa, irrespective of whether or not they have a contractual relationship with the relevant public service provider. The respondents accepted that the provision of electricity is one of those services that local government is required to provide. Indeed, they could not have contended otherwise. In Mkontwana, Yacoob J held that 'municipalities are obliged to provide water and electricity to the residents in their area as a matter of public duty.' Electricity is one of the most common and important basic municipal services and has become virtually indispensable, particularly in urban society."²²

On this reading, the provision of electricity by a municipality to its customers is a "basic municipal service" that is integral to "an acceptable and reasonable quality of life and, if not provided, would endanger public health or safety or the environment".²³

The role envisaged for the IPP in relation to the Project does not entail the IPP providing a service to the local community as contemplated in *Joseph*. The installation, commissioning and generation activities envisaged for the Project do not directly entail the provision of services by the IPP on behalf of the Municipality, notwithstanding the benefit to the local community due to an enhanced service. Therefore, the Project scenario does not entail the provision by the successful IPP/s of a "municipal service" as defined in the Systems Act.

The ancillary nature of the activities (in the sense of being ancillary to the reticulation functions of the Municipality), and the indirect interest of the local community in the activities to be performed by the IPP, means that the IPP will not be providing "municipal services". Therefore, the process provided for in section 78 of the Systems Act is not applicable to the Project.

5.3.2 IS THE PROJECT A PUBLIC-PRIVATE PARTNERSHIP?

The PPP Regulations define a public-private partnership as an agreement which, at a minimum, meets the following requirements:

- is concluded between a municipality and a private party;
- the private party performs a municipal function for or on behalf of a municipality, or acquires the management or use of municipal property;

²² *Joseph and Others v City of Johannesburg and Others* 2010 (4) SA 55 (CC) at para 34.

²³ *Joseph and Others v City of Johannesburg and Others* 2010 (4) SA 55 (CC) at para 34.

- the private party performs the municipal function for its own commercial purposes;
- the private party assumes substantial financial, technical and operational risks in connection with the performance of the municipal function or the management or use of the municipal property; and
- the private party receives a benefit from performing the municipal function or from utilising the municipal property or from both, by way of consideration to be paid or given by the municipality or charges or fees to be collected by the private party from users or customers of a service provided to them.

In order to be a PPP, the contractual arrangements must meet all of the above requirements.

Although the Project envisages that the selected IPP/s will establish new generation capacity facilities, either within the area of jurisdiction of the Municipality or outside the Municipal area but wheeled to the Municipality, for purposes of sale of that electricity to the Municipality as buyer, it is questionable whether the establishment of that new generation capacity is a municipal function.

The definition of a PPP in the PPP Regulations shows that if a private party is performing a municipal function or is using municipal property for commercial purposes, the transaction is a PPP, as long as the private party is assuming 'substantial' risk and is receiving a financial benefit from undertaking this commercial activity. This benefit can be in the form of consideration from the municipality, or the private party charging users or customers for a service provided to them.

Electricity is generally considered 'goods', not services. The sale of electricity to a municipality is, for the reasons stated above, not the provision of a 'service' in general terms, nor the performance of a 'municipal service' as defined in the Systems Act; and it is also not the performance of a municipal function *for or on behalf of a municipality*. Despite the Municipality having procured the electricity from a third party, the arrangement between the Municipality and the IPP is not one where the IPP generates electricity as agent of the Municipality, or as a service provider in accordance with the instructions of the Municipality.

As such, an IPP project, the outcome of which is the sale of electricity to the Municipality, is not, on its own, a PPP.

There may be exceptions, for example if the Project were to be located on municipal land and using municipal infrastructure or resources, such as a waste to power facility constructed and operated by the private party for the Municipality, or if the generation facility were to be constructed in accordance with the specifications of the Municipality and transferred to the Municipality upon completion.

5.3.3 IS THE PROJECT NECESSARILY A PPP IF IT IS LOCATED ON MUNICIPAL LAND?

The definition of a PPP as provided in the PPP Regulations (which is described in paragraph 5.3.2 above) includes transactions in which a private party *“acquires the management or use of municipal property for its own commercial purposes”* and *“receives a benefit from performing the municipal function or from utilising the municipal property”*.

The question which arises in the context of the Project, is whether a transaction in which an IPP makes use of municipal land for its generation activities automatically constitutes a PPP. The reason for consideration of this question is that the use of municipal land for IPP renewable energy generation facilities has not been ruled out.

Even where the Project is located on municipal land, it will not necessarily qualify as a PPP. In our view, whether or not the Project would be a PPP depends on a number of considerations.

At one end of the spectrum, there is a scenario where the Municipality stipulates that the Project must be located on a specific parcel of municipal land; and the IPP funds, constructs and operates a generation facility on that land, but the land (and the facility) are owned by the Municipality which takes over (or re-tenders the operation of) the facility on expiry or termination of the IPP contract. In that scenario, the contract concluded with the IPP is not only a PPA; it would also regulate access to and risks in relation to the municipal land; responsibility for obtaining authorisations and permits required to locate the facility on the land; and handover of the facility on expiry of the contract term. In that scenario, it is fairly likely that the transaction will meet the definitional requirements of a PPP.

At the other end of the spectrum, there is a scenario where the responsibility to secure suitable land and associated rights for the duration of the Project rests with the IPP, but the Municipality provides prospective bidders with information regarding municipal land that is or may be available for that purpose, and bidders make the appropriate arrangements with the Municipality to secure rights in respect of that land. Ownership in the generation facility remains with the IPP and the Municipality purchases only electricity. All risk and responsibility in respect of permitting, authorisations and suitability of the land remains with the IPP. In this scenario, it is unlikely that the Project will be a PPP. This is because, although the Project will be located on land owned by the Municipality, the consideration received by the IPP for the sale of electricity to the Municipality is unrelated to its use of the land. If the Project is located on municipal land, there would be two separate contracts envisaged between the IPP and the Municipality – namely, a contract of lease in respect of the municipal land, as well as a PPA between the IPP and the Municipality. The ‘benefit’ received by the IPP relates only to the sale of the generated power to the Municipality, rather than the IPP’s use of the land. The IPP would receive this benefit from the Municipality, whether the Project is located on municipal land or private land.

In the second scenario, the lease agreement entered into between the IPP and the Municipality creates an arm's length relationship between the Municipality and the IPP, from which the IPP receives no financial compensation, nor performs a municipal function.

Therefore, it is our view that where the Project involves the construction of the facility on municipal land, it is unlikely to be characterised as a PPP unless the Project falls into the first scenario described above – in which case all bidders would be competing to build and operate the generation facility on the specific allocated land.

5.3.4 IS A SECTION 34 DETERMINATION A PRE-REQUISITE TO THE ESTABLISHMENT OF NEW GENERATION CAPACITY BY ANY PERSON?

The language of section 34 of the ERA is permissive. It states that the Minister “may” determine that new generation capacity is needed and, if so determined, also specify the source from which the new electricity must be generated and, once generated, to whom it must be sold. There is nothing in section 34 which suggests that no other organ of state, or private person, may establish new generation capacity without a Ministerial determination.

The purpose of section 34 of ERA, in our understanding, is to create an extra-ordinary mechanism that can be invoked by the Minister in circumstances where the ‘organic’ development of the electricity generation sector is insufficient to meet projected demand, and a gap is identified which the Minister, as the responsible Cabinet member, is empowered to fill through the establishment of new generation capacity. The wording in section 34 refers to the need for new generation capacity being determined by the Minister “*to ensure the continued uninterrupted supply of electricity*” – implying that, if there are sufficient generation projects being licensed and operated without the intervention of the Minister, there would be no need to invoke section 34.

If a section 34 determination was a pre-requisite to obtain a licence for the operation of new generation capacity facilities, the ERA would need to contain –

- a prohibition on the establishment of new generation capacity in the absence of a section 34 determination; or
- a requirement that an applicant for a generation licence must satisfy NERSA that its project is included in / covered by a section 34 determination; or
- a provision to similar effect.

There is no prohibition on the establishment of new generation capacity in the absence of a section 34 determination, in ERA. Despite this position (that a section 34 determination is not a legal pre-requisite), section 34 has for some reason come to be perceived, at least by some commentators, as a necessary first step in the establishment of new generation capacity generally. This may be because of section 34(3) of ERA, which provides that NERSA, in

issuing a generation licence, is bound by a section 34 determination, and may facilitate the conclusion of a power purchase agreement between a generator and a buyer. Therefore, having a section 34 determination supporting an IPP programme gives the procurer, buyer and participants in that programme some assurance that NERSA will grant the required generation licences.

In our view, a section 34 determination is not required as a pre-requisite for the Project.

However, there may be some advantages to obtaining a section 34 determination prior to undertaking the project. For example, because NERSA is bound by any such determination once it has concurred, the successful bidders will be more or less assured of getting generation licences. In addition, if the practice established under the national REIPPPP were to be followed in relation to the Project, cost recovery for the Project, for the Municipality, may be assured by NERSA in the form of a letter addressed to the Municipality before it signs the PPA/s. However, the provision of cost recovery assurance is not regulated in the ERA and if, as discussed further below, electricity licences for the IPPs are not required, then it may be unlikely that NERSA would give cost recovery assurance to the Municipality.

In addition to the above, a section 34 determination creates a clear framework and legal basis for procurement of the new generation capacity, which may provide comfort to lenders. Therefore, the prudent approach for municipalities is, arguably, to request a Ministerial determination.

On the other hand, an application for a Ministerial determination in terms of section 34 is potentially risky, as it is a lengthy process and there is no assurance that the application will be approved. If the Minister of Mineral Resources and Energy or NERSA were to refuse the request for a section 34 determination, or were to issue the determination on terms that were not requested by the Municipality, the Municipality would be faced with a dilemma as to whether to proceed without one on the basis that it is not strictly speaking required.

There is also no guarantee that a section 34 determination will be coupled with cost recovery assurance from NERSA. In a recent NERSA approval of a section 34 determination requested by Eskom, for a gas project, NERSA declined to include reference to cost recovery in its concurrence.

We note, importantly, that the proposed new section 34(10)(b) in the ERA Bill provides that NERSA, in exercising its powers and performing its functions in terms of the Act, “*may issue a licence or registration certificate ... in the absence of a determination made by the Minister*”. Once the ERA Bill becomes law, this clarifies the position that a section 34 determination is not a pre-requisite to the establishment of new generation capacity.

In summary, a section 34 determination in terms of ERA is not a necessary precondition for procurement of the Project. In addition, given the uncertainty of the outcome of a

request for a section 34 determination, and the time required in order to obtain the Ministerial determination and NERSA concurrence, the potential advantages of having a section 34 determination may well be outweighed by the risks. On balance, we do not believe a section 34 determination is warranted for the Project.

5.3.5 ARE THE NEWGEN REGULATIONS APPLICABLE TO THE PROJECT?

Regulation 2 of the NewGen Regulations provides that the Regulations apply to the procurement of new generation capacity by organs of state in the energy sector. The term '*new generation capacity*' is defined in the NewGen Regulations with specific reference to electricity capacity or generation capacity made available "*pursuant to a determination in terms of section 34(1) of the [ERA] Act*".

It follows, therefore, that the NewGen Regulations are only applicable where electricity or generation capacity is to be established in accordance with a determination by the Minister in respect of such electricity, in terms of section 34 of ERA.

As such, if the Project is not undertaken pursuant to a section 34 determination, the NewGen Regulations do not apply to the project.

We note, however, that the precise scope and meaning of Regulation 5(3) of the NewGen Regulations is a matter of some debate, given that Regulation 5(3) –

- seems to be premised on an understanding that municipalities require permission to procure or buy new generation capacity;
- overlooks the fact that the NewGen Regulations apply to projects which are the subject of a section 34 determination, which would already constitute a Ministerial approval for the project;
- is premised on the sale of electricity to a municipality being a "municipal service";
- assumes that all municipal electricity generation initiatives have the characteristics of a PPP; and
- assumes that the new generation capacity will be procured by municipalities in accordance with the IRP.

In particular, mixed opinions have been expressed about whether Regulation 5(3) imposes mandatory conditions on municipal IPP procurement, thereby obligating a municipality to seek Ministerial approval to procure new generation capacity, and requiring that any such procurement be in accordance with the IRP. Although the DMRE has from time to time taken the position that municipal IPP procurement should be channelled through the Regulation 5 mechanism, that view is not supported in the wording of the ERA or the terminology used in the NewGen Regulations.

Although, as stated above, it is our view that the requirements of Regulation 5 do not strictly speaking apply to the Project (because the Project does not involve the establishment of new generation capacity pursuant to a section 34 determination), the pragmatic approach is arguably to conduct a feasibility study which as far as reasonably possible meets the standards set out in Regulation 5(2), for purposes of satisfying relevant stakeholders, including:

- the Minister (who may be asked for deviation approval in terms of section 10(2)(g) of ERA if there is no section 34 determination and the MW are not provided for in the IRP);
- NERSA, which may need to license successful bidder projects; and
- the national and provincial treasuries which must be consulted in the course of obtaining municipal council approval in terms of section 33 of the MFMA.

5.3.6 RELEVANCE OF CIRCULAR NO 118 TO THE PROJECT

As stated in **Annexure B**, Circular No 118 issued by National Treasury is in the form of guidance and is not binding on municipalities. However, it may serve as a useful indication of National Treasury's views on the regulatory requirements for municipal IPP projects and therefore allows the Municipality to anticipate National Treasury's position in the event that its views and recommendations are sought, for example during the process of seeking section 33 approval in terms of the MFMA.

Annexure B of Circular No 118 contains the roadmap for renewable energy procurement projects undertaken in terms of Scenario 2. Scenario 2 is a municipal IPP programme in which the municipality is both procurer and buyer, and most closely resembles the Project.

The Scenario 2 roadmap breaks the procurement process up into 5 main stages, which various sub-stages, as described below:

5.3.6.1 *Planning/concept/design which includes –*

- Project initiation activities, such as (i) defining the objectives of procuring renewable energy from IPPs and the expected outcome of the procurement; (ii) establishing the extent to which the proposed procurement aligns with other municipal strategic objectives, priorities, development objectives, budgets and plans; and (iii) developing an initial high-level business case;
- Pre-feasibility/initial assessment of project viability, in which the municipality determines at concept level of the procurement will result in acceptable financial burden to the municipality and its residents, as well as whether it is worthwhile to proceed to the feasibility study;
- Stakeholder/policy support for the procurement, during which stage the municipality seeks initial key stakeholder buy-in and develops a robust stakeholder engagement plan

including approach and timing for consulting the key stakeholders such as National Treasury, the relevant provincial treasury, COGTA and the DMRE as required by section 33 of the MFMA; and

- Feasibility study, which must, at a minimum, demonstrate the anticipated value for money to be achieved through the procurement of new generation capacity from the IPP and municipality's ability to satisfy the material legal, financial and technical requirements including consents that will be required in order to procure the new generation capacity, as well as if the procurement triggers the need for a COS Study which is critical to tariff setting. If the procurement is found to be feasible/affordable, the municipality must apply for consent in terms of Regulation 5 of the NewGen Regulations and obtain approval from the Council to proceed with the procurement.

5.3.6.2 Procurement activities and approvals, which includes –

- Procurement preparation, where the municipality must, among other activities, establish an internal dedicated unit to procure power or generate capacity;
- Document design and initiation of procurement process, where the municipality must prepare the procurement documents and release the procurement documents to the market;
- Evaluation, where the bid evaluation committee evaluates the bid responses according to the pre-determined selection criteria and, after adjudication by the bid adjudication committee, the preferred bidders are selected, and a municipal resolution is obtained to appoint the preferred bidder and to commence negotiation of the PPA and ancillary agreements (if any);
- Negotiating and contracting, which includes making the draft PPA available for public comment in line with section 33 of the MFMA, and soliciting the views of National Treasury, the relevant provincial treasury, COGTA and the DMRE and submitting the section 33 report to the municipal council in order to obtain council approval for the conclusion of the PPA;
- Commercial close, which entails seeking all outstanding municipal approvals as well as all outstanding authorisations required by the IPP; and
- Implementation and contract management, which includes putting into place a clear contract management plan including mechanisms for managing the contract's strategic objectives and contract administration, as well as the periodic review of the PPA.

The planning and implementation phases outlined above are broadly consistent with the approach and methodology proposed in the inception report.

Circular No 118 also attempts to make sense of the regulatory requirements in the ERA, including as to whether a section 34 determination is required, and a Ministerial approval in terms of Regulation 5 of the NewGen Regs. These requirements are discussed elsewhere.

5.3.7 IS THE PROJECT EXEMPT FROM THE LICENSING REQUIREMENT IN TERMS OF SCHEDULE 2 OF ERA?

Section 7(2) of ERA states that notwithstanding the licensing requirements set out in section 7(1), a person involved in an activity specified in Schedule 2 of ERA need not apply for or hold a licence issued by the Regulator.

In terms of clause 2 of Schedule 2, titled “*Activities exempt from licensing and registration*”, the following activities are exempt from the requirement to apply for, and hold a licence under ERA and these activities are not required to be registered with the Regulator—

- 2.1 the operation of a generation facility with or without energy storage for the sole purpose of providing standby or back-up electricity in the event of, for a duration no longer than, an electricity supply interruption.
- 2.2 the operation of any generation facility with or without energy storage irrespective of capacity (MW), where the facility does not have a Point of Connection.
- 2.3 the generation facility is operated to supply electricity to one or more customers and there is no wheeling of that electricity.

“*Wheeling*” is defined in Schedule 2 of the ERA as the “*conveyancing of electricity from the Point of Connection to a point of consumption through a third-party transmission or distribution network.*”

IPP generation facilities which are selected pursuant to the Project and which “*are operated to supply electricity to [the Municipality] and there is no Wheeling of that electricity*” arguably fall into the exemption category provided for at clause 2.3 of Schedule 2, and as such would be exempt not only from licensing but also registration.

Other IPP generation facilities may, however, have a point of connection on the Eskom distribution network (within the Stellenbosch municipal area), or may be located outside the Stellenbosch municipal area and have a point of connection on the Eskom transmission network. In relation to those IPP facilities, clause 3 of Schedule 2 of ERA will be applicable. Clause 3 of Schedule 2 exempts certain activities from the licensing requirement in section 7 of ERA, but requires that they must still be registered with NERSA. One of the exemptions provided in clause 3 of Schedule 2 is in respect of,

“The operation of any generation Facility with or without energy storage, irrespective of size or capacity, with a Point of Connection on the transmission or distribution power system, in circumstances where ... the generation Facility is operated to supply electricity to one or more customers by Wheeling; and the generator has entered into a Connection agreement with the holder of the transmission or distribution licence in respect of the power system over which the electricity is to be wheeled.”

The term ‘customer’ is defined in the ERA as “*a person who purchases electricity or a service relating to the supply of electricity*”. The wording of clause 3.1.1 of Schedule 2, quoted above and read with applicable definitions, seems to create a clear distinction between a ‘customer’ and the holder of a transmission or distribution licence. In the scenario described above, Eskom (transmission or distribution) would be the licence holder, and the Municipality would be the customer. This provision thus requires that for the exemption to apply, the holder of the transmission or distribution licence through which the electricity is wheeled is distinguishable from the customer, for purposes of Schedule 2. This interpretation is supported by the definition of wheeling, which anticipates that the customer is not the same person as the owner / operator of the distribution network through which the electricity is conveyed to the customer.

In conclusion, IPP generation facilities connecting directly to the Municipality’s distribution system are likely exempt from both licensing and registration, in terms of clause 2 of Schedule 2; and IPP generation facilities connecting to the Eskom transmission or distribution system and wheeling their electricity to the Municipality are likely exempt from licensing but required to register with NERSA, in terms of clause 3 of Schedule 2. None of them will be subject to the requirement of a generation licence.

5.3.8 IS A MINISTERIAL DEVIATION APPROVAL IN TERMS OF SECTION 10(2)(G) OF ERA REQUIRED?

Section 10(2)(g) of ERA provides that where any person applies to NERSA for a licence in terms of section 7 of ERA, such application must include evidence of compliance with the IRP or provide reasons for any deviation for the approval of the Minister.

As stated above, it seems likely that none of the IPPs selected under the Project will have to obtain a generation licence. If that is correct, then the provisions of section 10(2)(g) become irrelevant. However, for the sake of completeness we include a discussion on this section here.

The 2019 IRP, includes (at Table 5) –

- an allocation for “*Other (Distributed Generation, CoGen, Biomass, Landfill)*” of 500MW per year from 2023 to 2030; and
- an allocation for solar PV which differs from year to year, but which amounted to 6000MW of uncommitted capacity at the date of publication of the 2019 IRP. That 6000MW has

since been allocated to IPP procurement programmes, through Ministerial determinations in terms of section 34 of the ERA.²⁴

The term ‘distributed generation’ is defined in the 2019 IRP as “*small-scale technologies to produce electricity close to the end users of power*”. The 2019 IRP also provides that the annual allocation for distributed generation relates to projects of between 1MW and 10MW.

Unless a capacity limit of 10MW or less is imposed on bidders under the Project conditions of bidding, the individual projects which may be procured under the Project could fall outside the ambit of the generation projects categorised as distributed generation in the 2019 IRP. If there are any generation projects which have a capacity which exceeds the 10MW threshold and which do require to be licensed (i.e. which are not exempted by virtue of Schedule 2) and are not provided for elsewhere in the 2019 IRP, will require a Ministerial deviation approval in terms of section 10(2)(g) of ERA before they can be licensed by NERSA – but this seems unlikely given the current Schedule 2 wording. Another contingency is that a subsequent IRP may replace the 2019 IRP.

In this regard it should be noted that the proposed 2023 draft IRP was published for public comment on 4 January 2024. The deadline for public comments was 23 February 2024, extended to 23 March 2024. Progress on the 2023 draft IRP will be tracked during the course of the Project.

Given that it seems likely that IPP facilities selected pursuant to the Project will not require generation licences, the question of whether the Project is provided for in the IRP becomes academic, and a Ministerial deviation approval in terms of section 10(2)(g) will not be necessary.

5.3.9 IS MUNICIPAL COUNCIL APPROVAL IN TERMS OF SECTION 33 OF THE MFMA REQUIRED, AND IF SO WHEN?

In terms of section 33 of the MFMA, a municipality may only enter into a contract that will impose financial obligations on the municipality beyond three financial years, after the prescribed process has been followed.

If the Project proceeds to completion, each of the PPAs concluded between the Municipality and a successful IPP seller will impose financial obligations on the Municipality for an extended

²⁴ GN 1015 published in Government Gazette 43734 dated 25 September 2020, and GN 3257 published in Government Gazette 48402 dated 6 April 2023.

period, likely 20 years. **Therefore, Municipal Council approval in terms of section 33 of the MFMA will definitely be required.** The procedure applicable to a section 33 approval and the considerations that must be factored into the Municipal Council decision are detailed in that section and summarised below.

First, the municipal manager must make available to the public the draft contract (PPA and its schedules), and an information statement summarising the municipality's obligations in terms of the contract, and must invite the local community and other interested persons to submit comments or representations in respect of the contract to the municipality. This disclosure is of course only possible once the Municipality has a draft contract which is in a near-final form – at the earliest when it is issued to the market with the RFP. If there is an opportunity to align the section 33 public participation process with the Municipality's IDP public participation process, this should be pursued.

Second, the municipal manager must solicit the views and recommendations of:

- National Treasury;
- the Western Cape provincial treasury;
- the Department of Co-operative Governance and Traditional Affairs (COGTA); and
- the Department of Mineral Resources and Energy.

The public participation process and stakeholder engagement described above must be done at least 60 days before the meeting of the Municipal Council at which the contract is to be approved.

The Municipal Council must then adopt a resolution in which it:

- determines that the Municipality will secure a significant capital investment or will derive a significant financial economic or financial benefit from the contract;
- approves the entire contract exactly as it is to be executed; and
- authorises the municipal manager to sign the contract on behalf of the Municipality.

When considering the contract, the Municipal Council must take into account :

- the Municipality's projected financial obligations in terms of the proposed contract for each financial year covered by the contract;
- the impact of those financial obligations on the Municipality's future municipal tariffs and revenue;
- any comments or representations on the proposed contract, received from the local community and other interested persons; and
- any written views and recommendations on the proposed contract by National Treasury, the relevant provincial treasury, the COGTA and the DMRE.

When considering the timeframes in which the above process should be undertaken, in relation to the Project, it must be noted that in terms of section 33(3) of the MFMA, the contracts submitted to the Municipal Council must be submitted in their final form, and in their entirety. Because the version of the PPA and its schedules that will be issued with the RFP is not in final form, it would be premature to initiate the process to obtain approval from the Municipal Council prior to appointment of preferred bidders and finalisation of the PPA.

During the bid preparation phase when prospective bidders are considering whether to bid and on what terms, it is conceivable that changes may be made to the draft PPA and other contracts, based on questions / feedback from the bidders. Therefore, in our view it would be prudent for the Municipality to begin the public participation and stakeholder process immediately after the RFP is issued, if the PPA and other Project agreements are in near-final form at that point; alternatively (i.e. if not) then soon after preferred bidders have been appointed as such, and to hold the Municipal Council meeting at which the section 33 approval is sought closer to the date for commercial close.

Letters of appointment as preferred bidder will have to be made explicitly conditional on securing section 33 approval from the Municipal Council.

5.3.10 ARE THERE REGULATORY REQUIREMENTS THAT IMPACT ON THE SELECTION OF A PREFERRED TECHNICAL SOLUTION OPTION?

5.3.10.1 Are there regulatory restrictions on embedded generation projects that impact the national grid?

Because Eskom (and imminently the National Transmission Company South Africa SOC Ltd) as the System Operator has ultimate responsibility for the operation of the IPS,²⁵ if a generation project falls within the boundaries of the IPS, for example, a solar PV plant connected anywhere on the transmission system (TS), or anywhere on an Eskom distribution network which is interconnected to the TS, the facility could be subject to remedial action if its operation were to “*jeopardise reliable operation*” of the IPS. In addition, Eskom would be able to shut down or synchronise alternators and generator transformers connected to the TS.

²⁵ Section 2 of the SO Grid Code. The IPS would include those parts of the Stellenbosch distribution network that are owned and operated by Eskom but not those parts that are owned and operated by the Municipality.

Section 5 of the System Operator Grid Code (SO Grid Code) also states that “[t]he System Operator shall have the ultimate authority to instruct operating on the TS. Operational authority for other networks shall lie with the respective asset owners.”

NRS 048-9, which provides guidance in terms of load reduction practices, states in item 4.5 that “[t]he responsibility for keeping the national electricity grid stable lies with the NCC [National Control Centre]. Therefore, if the NCC requires additional load reduction utilities may assume this is in the best interest of the grid.”

NRS 048-9 further states, in item 4.5.2 (*Management of frequency during loadshedding*), that the NCC is responsible for the frequency of the system during loadshedding, and that due to the fact that the implications of controlled switching at this level may significantly affect system frequency, the System Operator is required to approve and coordinate reduction regimes²⁶ adopted by licensees.

NRS 048-9 also permits the System Operator to, at any time, instruct any of the following changes as to how utilities implement shedding:

- a) To delay a particular licensee’s implementation of loadshedding;
- b) Extend the period over which a stage rotates through a time period to 1 hour;
- c) Or any other instruction which the System Operator decides is necessary for system stability.

As regards the Municipality’s Distribution Licence, there are no conditions or obligations provided for in such Licence, that would require consultation with or permission from Eskom for the establishment of an embedded generation facility in the Municipality’s licensed area.

With regard to the Electricity Supply Agreements, entered into between Stellenbosch Municipality and Eskom, there are no terms that require consultation with or permission from Eskom for the establishment of an embedded generation facility in the Municipality’s licensed area.

However, it should be noted that embedded generators connected to the distribution system will still have to comply with the specifications and obligations set out in the various distribution Grid Codes, and depending on whether the embedded generation facility falls within an

²⁶ Load reduction regime is not defined, but item 4.7.5.1 indicates that it refers to “the expected load reduction Stage and applicable schedules to be implemented”.

exemption provided for in Schedule 2 of the ERA or not, may need to apply for licensing or registration with NERSA. See paragraph 5.3.7 for a discussion on the licensing requirements.

5.3.10.2 Are there any regulated processes that a municipality must follow to confirm that the Eskom network capacity can handle the connection of an embedded generation project?

In order for a generator to be grid tied to the IPS, as contemplated in Option 1C which envisages one solar PV plant connected anywhere on the IPS, an application for grid connection will have to be made in accordance with the IGCAR, the process for which is set out in paragraph 1.14 in **Annexure B**.

However, if the embedded generation facility is connected to the Municipality's distribution system, then an application for a grid connection should be made to the Municipality. In terms of the information available in the Grid Codes, there is no indication that a municipality would need to involve or engage Eskom in applications made to the Municipality for grid connection.

What an application for connection to a municipal Distribution System would entail, depends on the Municipality's defined processes. This will be an important aspect to clarify and resolve, before any IPP procurement commences.

5.3.10.3 Can a municipality commence an application for a grid connection, and later transfer it to an IPP?

There is no indication in the IGCAR that an approved grid connection application submitted to Eskom is transferable, and therefore it should not be assumed that the Municipality could transfer a grid capacity allocation made by Eskom for the Municipality, to an IPP at a later stage (this response assuming that the generation facility is connected to the Transmission System). It should be assumed that IPPs will themselves make the applications for grid capacity allocations for the Project, whether those applications are made to the Municipality (for connection to a point on the Municipality's distribution network), or to Eskom (for connection to a point on the Eskom transmission network or the Eskom distribution network).

5.3.10.4 Can Eskom prevent the connection of an embedded generation facility to a point of connection on the municipal Distribution System, and would the Municipality be in breach of its Distribution Licence, if it were to do so?

As stated above, Eskom does not have operational authority over projects connected to the municipal Distribution System, and the Municipality's Distribution Licence does not contain any terms that would place the Municipality in breach of its Distribution Licence if it were to connect embedded generation facilities to points of connection in the municipal Distribution System.

5.3.10.5 Does the answer to any of the above questions change depending on the technology / operation of the generator (e.g. solar PV plant only, vs. solar PV plant + BESS) or the size of the generator?

Whether the technology utilised is solar PV, or solar PV and BESS, the Municipality would still be subject to loadshedding, unless it meets the requirements set out in 4.5.4 of NRS 048-9, for load curtailment.

We note that although the *Grid Connection Code for Battery Energy Storage Facilities* (BESF) Connected to the Electricity Transmission System (TS) or the Distribution System (DS) in South Africa (“**BESF Grid Connection Code**”) does not place any restrictions on embedded generation projects, any generation facilities which include BESS will have to comply with the technical specifications of the BESF Grid Connection Code, should the technical option chosen for the Project include a BESS component.

5.3.10.6 Can municipalities reduce the impact of loadshedding by the establishment of embedded generation in their area of jurisdiction?

Load curtailment is regulated at item 4.5.3 of NRS 048-9, which provides that a licensee may identify specific customers who, instead of being shed, can provide a pre-defined amount of load to be curtailed within a maximum of 2 h on instruction from the licensee. Item 4.5.3 sets out the criteria for eligibility for load curtailment.

According to item 4.5.4.4, customers who participate under a notified load curtailment scheme will be excluded from loadshedding schedules, though it should be noted that in terms of item 4.5.4.7, in the event that a customer does not achieve the load curtailment requirements during an emergency, the licensee shall have the right to shed the customer after reasonable notice has been given.

Furthermore, a customer on self-managed load curtailment must meet the requirements of load curtailment for at least eight out of the ten most recent load curtailment days/events, and should the customer fail, be placed back onto load shedding schedules.

Section 4.5 of NRS 048-9 provides that customers who are eligible for curtailment are required to declare and arrange this with the applicable licensee. Only once it has been agreed and the load shedding schedules have been adjusted to accommodate this reduction in load, will they be curtailed instead of being loadshed.

Item 4.12 of NRS 048-9 specifically makes provision for a licensee or end use customer using embedded generations a means of reducing the impact of load shedding.

This however can only be done in the case that such generation is not already included in the normal load profile of the licensee or customer. (4.12.2.1).²⁷

Furthermore, customers with internal generation capability, but who are still taking some supply from a licensee, shall be subject to loadshedding, if their generation follows a regular usage pattern. The required reduction will depend on the amount of power taken from the licensee.

There is currently little guidance in case law on the extent to which municipalities can reduce the impact of loadshedding by the establishment of embedded generation in their area of jurisdiction, or on whether embedded generators can be exempt from load shedding.

The case of *Rural Maintenance (PTY) Ltd and Others vs Eskom Holdings SOC Ltd and Others*²⁸ dealt with a dispute between Eskom and Mafube Local Municipality, on the municipality's right to continue to implement "self-loadshedding" (as contemplated in item 4.1 of the previous 2nd Edition of NRS 048-9), and the issue of "voiding".

The Mafube Local Municipality described voiding as the process used by it, in providing an alternative source of energy to cover the shortfall of electricity when Eskom switches off certain customers, or the utilisation of a determined alternative energy source used to cover the shortfall of electricity supplied by Eskom.

Eskom submitted that "voiding" was not a reduction of the load, and does not alleviate the constraints on the system as a whole.²⁹

The application by Mafube Local Municipality was ultimately dismissed on procedural grounds, and the merits of the parties' arguments were not addressed. Mafube Local Municipality has also not appealed the judgment.

²⁷ According to 4.12.3, *Wheeling of energy must be taken into consideration when determining the target for customers. If the energy generated remotely is used during normal production, then it is part of the customer's profile and can be used to reduce the customers load base used to set targets. It cannot be used to directly offset load reduction. If the remote energy is only generated during load reduction periods, then this may be used to offset loadshedding since it would not have been part of the customers normal baseload.*

²⁸ 2023] ZAGPJHC 354.

²⁹ Ibid at para 14.

However, Eskom did release a media statement on 21 April 2023,³⁰ explaining their reasons for rejecting the self-loadshedding implemented on behalf of the Mafube Local Municipality.

Eskom explained that:

“In the case of Frankfort, the generation capacity of the solar PV plant is not sufficient to cover all the electricity needs of the town during loadshedding. Even during daytime hours when the plant is running at optimal operation, a portion of the town’s electricity requirements are still supplied by Eskom. As in the rest of the country, the Eskom-supplied electricity to Frankfort is also subject to loadshedding. If RFS was able to substitute the Eskom-supplied portion through alternative electricity sources, such as electricity from battery storage or another generation facility that is only employed during a power outage, they would have been able to eliminate the need for loadshedding.

NRS048-9 clause 4.12.2.1 states: “Where a municipality or metropolitan municipality has embedded generation, and such generation is not already included in the normal load profile of the municipality, such generation may be used to reduce the load reduction required under emergencies”. In the case of Frankfort, the generation is already included as part of the normal load profile and as such the generation cannot be offset against loadshedding; therefore, RFS is non-compliant to clause 4.12.2.1. The PV plant in Frankfort has no standby capability to offset the total demand; thus, the plant’s output forms part of the system base load and Frankfort remains subjected to loadshedding.”³¹

The implication of this judgment is that in order for embedded generation projects to be used by a municipality to off-set load reduction, it would be necessary to ensure that the embedded generation facility, or battery storage facilities, produce sufficient supply to off-set the entire load for the duration of the load shedding period. Whether doing so, on its own, would mean that Eskom is required to exempt the municipality from load shedding, does not necessarily follow.

³⁰ Available at [Media-Statement_Eskom-welcomes-dismissal-of-Rural-Maintenance-case-but-wishes-to-address-misconceptions_21April2023-002-002.pdf](#).

³¹ Ibid at page 2.

5.3.11 WILL NERSA HAVE TO APPROVE THE PROJECT PRICING?

Provided that the successful IPP sellers fall within the exemptions from licensing under the ERA, which we believe will be likely, those IPP sellers will not have to submit their pricing under the PPAs for approval by NERSA.

However, NERSA will have to approve the fees, charges and tariffs that can be levied by the Municipality vis-à-vis its customers, therefore the pricing which is bid by prospective IPP sellers in the Project is directly relevant to the success of the Project and the competitiveness thereof, relative to the price paid by the Municipality to Eskom under existing supply arrangements, and also possibly relative to the pricing bid by prospective sellers in other IPP procurement programmes.

Municipalities have the constitutional and statutory authority to levy charges and tariffs for municipal services, in accordance with a tariff policy which must be applied with reference to a number of principles set out in section 74 of the Systems Act. Notwithstanding this authority, municipalities may only charge the tariffs approved by NERSA in accordance with ERA. ERA requires NERSA to regulate prices and tariffs, amongst other matters, in a manner which is consistent with national government policy including the Electricity Pricing Policy published by the DMRE.

On an annual basis, NERSA issues a municipal tariff guideline which approves a percentage guideline increase for municipally charged electricity tariffs, and reviews the municipal tariff benchmarks.

The municipal guideline tariff increase is based on the approved increase in the bulk price of electricity supplied by Eskom to municipalities. Only once the municipal guideline tariff increase has been published, can municipalities finalise and apply for their individual proposed tariff increases.

In the ordinary course, the process of setting municipal electricity tariffs historically took place in the following stages:

- the issuing of a periodic Multi-Year Tariff Determination (“the MYPD”) in respect of Eskom, which determines the revenue that Eskom is permitted to recover during the MYPD cycle. These determinations typically extend over three to five-year periods, and set, amongst other things, the wholesale price at which Eskom sells electricity to the municipalities, and the tariff at which Eskom’s distribution division sells electricity to customers;
- the issuing of a consultation paper setting out its proposed methodology for determining municipal electricity tariffs and which initiates a public consultation process;
- the issuing of a municipal electricity tariff document, the Guideline and Benchmarking Methodology, containing decisions on the guideline increase, stated as a percentage

to be applied to the current year's tariffs in order to calculate the following year's tariffs, and the benchmark tariffs for various categories of customers (domestic, commercial, industrial, agricultural);

- each municipality must then submit its tariff application for the following year to NERSA; and
- once a municipality's proposed tariffs have been approved by NERSA, they are incorporated into the municipality's annual budget, to be approved by the municipal council.

However, in October 2022, the Gauteng High Court handed down a decision in the case *Nelson Mandela Bay Business Chambers NPC and Another v National Energy Regulator and Others*,³² declaring NERSA's Guideline and Benchmarking Method unlawful and invalid on the basis of being inconsistent with the requirements of section 15 of the ERA. The reasons for the court's decision can be briefly summarised as follows:

- the Guideline and Benchmarking Method did not provide for consideration of the actual electricity supply costs for a particular licensee for the year in question;
- the Guideline and Benchmarking Method did not involve any determination of a reasonable margin or return for that particular year;
- the Guideline and Benchmarking Method was based on averages and generic norms which were applied to all municipalities regardless of their costs and efficiencies; and
- as a result, municipalities charged tariffs that were much higher than the cost of supplying the electricity efficiently.

In terms of the court's order, NERSA is prohibited from applying the Guideline and Benchmarking Method when considering and approving municipal electricity tariffs from the start of the 2024/2025 municipal financial year onwards.

Though the court ordered NERSA to adopt a properly cost-effective methodology, no such methodology has as yet been published. NERSA may have to approach the court and ask for an extension to develop a new methodology for municipal tariff increases, to lawfully approve them in time for implementation on 1 July 2024. In November 2023, NERSA stated that it would not publish guidelines and tariff benchmarks, but instead, municipalities should base their applications on cost of supply studies, conducted in line with NERSA guidelines.

³² ZA GPP HC 778 (20 October 2022).

Additionally, in January 2024, NERSA distributed tariff application forms that are substantively similar to the previous Guideline and Benchmarking Method, and therefore may be susceptible to legal challenge.

5.3.12 WHICH ENVIRONMENTAL CONSENTS ARE LIKELY TO BE REQUIRED FOR THE PROJECT?

A number of Environmental Consents will need to be secured by bidders, either prior to bid submission or once they become preferred bidders, but in any event prior to the development and operation of their renewable energy (Solar PV plant / BESS) projects in Stellenbosch (“**RE Facilities**”).

To reduce the risk of failed or delayed RE Facilities selected pursuant to the STMIPPPP, it will be important that the Municipality ensures that all relevant Environmental Consents have been secured by the relevant bidders / preferred bidders by no later than the time specified in the RFP or preferred bidder appointment letters.

The Environmental Consents can be divided into two broad categories, as follows:

Key Environmental Consents: those that should, and as a matter of practice are required to, be obtained prior to the bid submission date, evidence of which must be submitted as part of the bid response; and

Other Environmental Consents: those remaining Environmental Consents that should be demonstrated to have been sufficiently progressed as at the bid submission date, so as not to delay financial close.

Table 5-1 below identifies the Environmental Consents that are typically required for the development and operation of a renewable energy facility.

For the purposes of **Table 5-1** below and so as to distinguish between Key Environmental Consents and Other Environmental Consents, the following colour coded key has been used:

Table 5-1 Summary of applicable Environmental Consents

	Red is for Key Environmental Consents. These require authorisation in terms of a statutory process with specified timeframes, the decision of which is at the discretion of the relevant identified regulatory authority. These are considered material to the development of the relevant Project.
	Yellow is for Other Environmental Consents. These are required from a regulator but not in terms of a statutory process with specified timeframes, or they are required to be secured from a third party.

Environmental Consents		
Relevant Approval	Relevant Authority	Key / Other Environmental Consent
An EA as required by NEMA for the renewable energy facility	DFFE or Provincial Environmental Authority	
A water use entitlement in terms of the NWA or a written confirmation(s) of a water allocation for all the water consumption needs of the renewable energy facility from a water services provider registered as such in terms of the WSA	Municipality or the DWS	
Biodiversity and or conservation permits, in terms of NEMBA and any applicable provincial laws, and biodiversity off set programmes	DFFE or Provincial Environmental Authority	
Protected tree licences, in terms of the NFA	DFFE or Provincial Environmental Authority	
Heritage: final comment from the regulator as well as any approvals in terms of the NHRA and any applicable provincial laws	SAHRA or Provincial Heritage Authority	
Section 7 and/or section 6 approvals in terms of the WSA for use of water outside of the municipal grid or for the provision of sanitation services by a third party	Relevant Municipality	
Permits in terms of CARA	DALRRD	
Permits and authorisations in terms of locally applicable by-laws	Relevant Municipality	
Consent of the Civil Aviation Commissioner to erect a potential obstacle to aviation or confirmation from the Civil Aviation Authority that no such consent is necessary	Civil Aviation Commissioner or South African Civil Aviation Authority.	
Copies of all letters received or applications made in terms of ECA from electronic communications network service licensees (Vodacom, MTN etc.)	Electronic communications network service licensee.	
Copy of an application or letter of no objection from SANDF in which the SANDF indicates that there will be no direct impact on landward activities, communication installations and aviation routes and light safety, in respect of the renewable energy facility	Department of Defence and/or SANDF.	
AGA Act authorisation, if applicable	Minister of Science and Technology, or relevant delegated authority.	
Copy of an application or letter of no objection from SAWS, in which the SAWS indicates that there will be no direct impact in the SAWS radar stations located in the	SAWS.	

vicinity, and that the SAWS therefore supports the development thereof in the proposed location, in respect of the renewable energy facility		
Building Plan Approval in terms of the NBR&BSA	Local Municipality	
Building Plan Approval in terms of the National Building Regulations and Building Standards Act 103 of 1977	Local Municipality	

A brief description of each of the Key Environmental Consents and the Other Environmental Consents is set out at **Annexure C**, along with the statutory source for the relevant Environmental Consent so as to provide background to the circumstances in which the specific Environmental Consent will be required. For Key Environmental Consents, the statutory process to secure the required Key Environmental Consent by the relevant bidder is described, as the relevant timeframes will be relevant as regards the timing of the operation of the renewable energy facility.

Annexure C also contains a brief description of the related appeal process for the Key Environmental Consents. Should a bidder's Key Environmental Consent be subject to an appeal, this introduces potential risk to the ability of the renewable energy facility to operate, until the appeal is resolved. Finally, for each of the Environmental Consents, the potential direct and indirect risks to the Municipality of the relevant bidder failing to secure the relevant Environmental Consent are also identified.

5.3.13 WHICH LAND-RELATED CONSENTS ARE LIKELY TO BE REQUIRED FOR THE PROJECT?

In this section, we anticipate the land-related rights and consents that may be required by bidders, in order to be in a position to establish new generation capacity projects. It is important for the Municipality to have an understanding of these requirements, for purposes of determining eligibility and functionality criteria that will be applied to bidders through the RFP, and assessed during the bid evaluation process.

Bidders will have to ensure that they have a secure right to occupy and use the land on which their facility will be installed, for the entire duration of the PPA. This could entail the IPP seller being the registered owner of all of the properties comprising the project site, or that the IPP seller has executed notarial lease/s for the whole of the project site for the duration of the PPA, or that the IPP seller has executed an option to lease or purchase all of the properties comprising the project site.

Bidders will also have to ensure that the IPP seller has the right to lawfully use the project site for the intended purpose. To this end, it may need to obtain consent for land use change, rezoning, subdivision, or the removal of restrictive conditions in terms of the title deed.

Further detail about the legal requirements for subdivision of agricultural land and rezoning, and the national and provincial legislation which is relevant to these matters, is provided in **Annexure B** hereto.

5.3.14 IF MUNICIPAL LAND IS USED FOR THE PROJECT, WHAT REGULATORY REQUIREMENTS APPLY?

Leasing of municipal assets is regulated by Chapter 4 of the Municipal Asset Transfer Regulations, which regulates the grant by municipalities and municipal entities of rights to use, control or manage capital assets in circumstances where sections 14 and 90 of the MFMA apply.³³ The term “capital asset” is defined to include immovable property.³⁴

The process for a municipality to approve a lease for an asset that has a value in excess of R10 million or with a duration of longer than three years, has the following requirements:

1. the lease may only be entered into after the accounting officer has conducted a public participation process regarding the proposed lease, which public participation process must itself receive the prior approval of the municipal council; and the municipal council itself has approved in principle that the lease may be granted;³⁵
2. the public participation process, in which the accounting officer invites the local community and interested persons to submit to the municipality comments or representations in respect of the proposed granting of the right, must commence and be publicised at least 60 days before the meeting of the municipal council at which the proposal to approve the lease is to be considered;³⁶
3. the accounting officer is also required to solicit the views of and recommendations of the National Treasury and the relevant provincial treasury;³⁷

³³ Regulation 33(1) of the Municipal Asset Transfer Regulations. Sections 14 and 90 of the MFMA apply to the permanent transfer or disposal of municipal capital assets.

³⁴ This is defined as (a) any immovable asset such as land, property or buildings; or (b) any movable asset that can be used continuously or repeatedly for more than one year in the production or supply of goods or services, for rental to others or for administrative purposes, and from which future economic or social benefit can be derived, such as plant, machinery and equipment;

³⁵ Regulation 34(1)(a) and (b) of the Municipal Asset Transfer Regulations

³⁶ Regulation 35(a)(i) of the Municipal Asset Transfer Regulations.

³⁷ Regulations 35(a)(ii) and 35(b) of the Municipal Asset Transfer Regulations.

4. the considerations which the municipal council should take into account deciding whether to grant the rights are set out in detail in Regulation 36.

In leasing municipal land and assets, individual municipalities' disposal management policies are also relevant. A disposal management policy should provide that –

- immovable property is let at market related rates except when the public interest or the plight of the poor demands otherwise; and
- all fees, charges, rates, tariffs, scales of fees or other charges relating to the letting of immovable property are annually reviewed.³⁸

Stellenbosch Municipality's Policy for Management of Municipal Agricultural Land³⁹ may also be relevant. The policy sets out decision-making guidelines for the management of municipal agricultural land with regard to the relevant national, provincial and local policy and legislative provisions that govern land ownership, access to land and land use. Item 4.1 of the Policy articulates the "Guiding principles" of the implementation plan, and states that: *"No rights or usage of municipal owned land shall be sublet or ceded to a third party without the prior written approval of the municipality"* (4.1.6); and: *"No new buildings shall be permitted on leased municipal land whether long term or not unless with specific agreement of the Council and then for a use and in a style that complements the environment."* (4.1.8).

Furthermore, item 4.5 of the Policy for Management of Municipal Agricultural Land prescribes a set of guidelines which must be followed by the Council for the allocation and management of municipal agricultural land within the framework of compliance with the applicable legislation and regulations, which include:

- that in a bid for municipal agricultural land, where bidders are equally competitive, preference will be given to HDIs;⁴⁰ (4.5.1)

³⁸ Regulation 40(2)(c)(i) – (ii) of the Supply Chain Management Regulations.

³⁹ Province of the Western Cape: Provincial Gazette Extraordinary 7750 27 March 2017.

⁴⁰ ***Historically Disadvantaged Individual*** is defined as meaning: "a South African citizen who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act 110 of 1983) or the Constitution of the Republic of South Africa, 1993 (Act 200 of 1993); and/or who is a female; and/or who has a disability, provided that a person who obtained South African citizenship on or after the coming into effect of the interim Constitution, is deemed not to be an HDI.

- that market forces will always be the point of departure in any land or property transaction and this must be recognised and acknowledged; (4.5.3)
- that there should be compliance with the Local Agenda 21 principles of sustainable development and environmental preservation (4.5.10).

The full set of guidelines can be found in item 4 of the Management of Municipal Agricultural Land Policy, and in **Annexure B**. Item 4.8 states that “*Save with prior approval, the municipal agricultural land may only be used for the purpose for which occupation was granted and purposes regularised by the relevant zoning schemes.*” The Management of Municipal Agricultural Land Policy also sets out in detail the process to acquire land or rights on agricultural land, in item 4.9.

In the event that there is Municipal land which could be made available to prospective bidders for purposes of the Project, it will be important for purposes of compliance with the constitutional procurement principles, that information regarding (a) the Municipal land which can be made available to prospective bidders for that purpose; and (b) the process by which such land will be made available; and (c) the criteria or considerations the Municipality will apply if requests are made by prospective bidders for land leases in respect of such land, is readily available when the RFP is issued and is made available in the same manner to all interested bidders.

Our recommendation is that any such arrangements between the Municipality and prospective bidders be kept separate from the Project procurement process and that requests for leases be determined independently of the Project procurement process. However as stated above, the information should be prepared in advance of the RFP issue date and should be readily available at least from that date, if not before that.

5.3.15 WHAT ARE THE LIKELY CONTRACTUAL ARRANGEMENTS REQUIRED FOR THE PROJECT?

The key contractual document required to regulate the relationship between the Municipality as buyer and a successful IPP bidder as seller, is a PPA.

Key items that are normally regulated in a PPA include the following matters:

- Risk and liability in respect of the project site;
- Restrictions on non-project use of the project site;
- Prohibition on use of electricity from the transmission or distribution system;
- General construction obligations;
- Commercial operation date (COD) and progress towards the COD;
- Connection at the delivery point;
- Testing and commissioning and certification;

- Delays in achieving the COD and consequences thereof;
- Determination of contracted capacity;
- The sale and purchase of energy and ancillary services;
- Title and risk in the energy;
- Restrictions on sales to third parties;
- Maintenance and inspections;
- Generation forecasting;
- Pricing and invoicing for energy and ancillary services;
- Deemed energy payments, where applicable;
- Scheduled and unscheduled outages and the consequences thereof;
- Reporting, record-keeping and project monitoring;
- Metering;
- Utilities and consumables;
- System events and the consequences thereof;
- Compensation events and the consequences thereof;
- Force majeure and the consequences thereof;
- Unforeseeable conduct and changes in law and the consequences thereof;
- Termination of the PPA for seller and buyer default;
- Project insurance;
- Seller undertakings (general);
- Intellectual property of the buyer;
- Set-off;
- Assignment, contractors and changes in control;
- Dispute resolution;
- Liability limits and third party indemnification;
- Confidentiality and protection of personal information;
- Governing law, notices and domicilium;
- Warranties and representations; and
- Miscellaneous matters.

In the case of the Project, it is likely that the economic development regime (including contractual conditions relating to economic development, any additional commitments made by sellers in relation to economic development, the requirements for reporting, monitoring and evaluation of performance against economic development requirements, and the penalty regime for non-compliance with economic development requirements, will also be provided for in the PPA. In the case of the REIPPPP those matters are provided for in a separate so-called Implementation Agreement, but the reasons for doing so (economic development obligations owed to the DMRE rather than to Eskom; and provision of government support for Eskom's financial obligations also regulated in the Implementation Agreement) do not apply in the Project.

The PPA typically has a number of schedules or annexures which support the provisions in the main agreement, and could include template notices and forms, project site and facility diagrams, pricing and indexation information and formulae, and other matters.

Other important project contract documents include the connection and use-of-system agreement, which regulates the relationship between the customer (the IPP seller) and the network grid provider (whether that be the Municipality or Eskom); the independent engineer agreement (between the Municipality, the IPP and a mutually agreed independent engineer); and one or more direct agreements which include the parties to the PPA and the connection agreement, but in addition the IPPs' lenders or agents of the lenders.

Value for Money negotiations which may impact on the terms of the project agreements discussed above may be necessary, and will take place only with preferred bidder(s).

A brief summary of the purpose and contents of following agreements, which will be issued in draft along with the RFP (i.e. as part of the procurement documents), is set out below:

- PPA
- Direct Agreement
- Independent Engineer Agreement
- Connection Agreement.

PPA

- The PPA is a standardised, non-negotiable contract that governs the purchase of energy output from IPPs by the Municipality. It outlines the terms and conditions for the sale and purchase of energy output from renewable energy facilities, recommending a 20-year term from the Commercial Operation Date (COD).
- The PPA covers various aspects including construction, financing, operation, maintenance, and energy output transactions between the IPP and the Buyer.
- Additionally, it establishes a framework for effective financial management, outage handling, and data monitoring.
- The PPA includes procedures for metering installations, relief or payment of the Deemed Energy Payment in certain events, dispute resolution mechanisms, and legal and governance matters such as force majeure, indemnity, termination, and confidentiality.
- It also addresses contract administration, representatives for each party, and handling of confidential information and media communication.

Direct Agreement

- The Direct Agreement which is expected to be concluded between the IPP, the Municipality, and the IPP lender, outlines the roles and responsibilities of key stakeholders.
- Central to this agreement are provisions concerning step-in rights, a mechanism designed to address default scenarios and ensure the continuity of project operations.
- In terms of this agreement, step-in rights empower the Agent, representing lenders, to appoint a representative, known as the Appointed Representative, during specific events or periods outlined in the agreement. This Appointed Representative assumes control over the project, taking on the responsibility to remedy defaults and fulfil the seller's obligations.
- The inclusion of step-in provisions serves to safeguard the interests of lenders and maintain project stability in the event of unforeseen circumstances such as financial distress or operational challenges.
- Furthermore, the agreement outlines the conditions under which step-in rights can be exercised, providing clarity and certainty to all parties involved. These conditions typically include instances of default by the seller or events that jeopardise the project's viability. By defining these triggers and outlining the corresponding procedures for the appointment and role of the Appointed Representative, the agreement aims to mitigate risks associated with project financing and ensure the timely resolution of issues that may arise during project implementation.
- In addition, the agreement also addresses the termination of this appointment through step-out provisions. If issues cannot be remedied or are resolved, or in the event of an Enforcement Event, the agreement allows for the termination of the Appointed Representative's appointment. This mechanism ensures that the project can transition smoothly back to the control of the seller or other designated parties once the conditions for step-in are no longer present.
- There may be a need for a Connection Direct Agreement in addition to the Direct Agreement, to regulate the connection-related issues that arise in the event of the exercise of Step-In rights under the Direct Agreement. This supplementary agreement would specifically regulate connection-related matters, to ensure the functioning of the grid connection and addressing any technical or logistical challenges that may arise during the intervention period outlined in the Direct Agreement.

Independent Engineer Agreement

- The Independent Engineer agreement is typically established between the Municipality as the buyer, the IPP as the seller, and an independent engineer mutually acceptable to both parties.
- This agreement outlines the terms and obligations surrounding the engagement of an Independent Engineer, who acts as an impartial expert responsible for specific functions allocated to them in the PPA.
- The key functions of the Independent Engineer relate to the confirmation of commencement of construction, review of the seller's construction documentation for compliance with laws and contractual requirements, testing and commissioning of the facility prior to commercial operation, certification of unit and facility completion and metering installation, certification of contracted capacity, dispute resolution in specified areas, and ad hoc services as and when required during the operating period.
- The agreement governs various aspects of the project lifecycle, from construction to operation and maintenance. It imposes stringent reporting obligations, and delineating consequential actions in case of breaches.
- Furthermore, the agreement outlines procedures for addressing breaches by any party, including avenues for suspension, termination, and dispute resolution.
- It also covers essential aspects such as amendments, notifications, and limitations on assignment and subcontracting, ensuring clarity and compliance throughout the engagement.
- In addition to its core provisions, the agreement includes miscellaneous clauses covering diverse areas such as partnership delineation, waiver of rights, confidentiality, and dispute resolution mechanisms.

Connection Agreement

- The connection agreement is typically concluded by Eskom (or the relevant network services provider) and the customer, in this case the IPP. This agreement establishes the legal framework governing the connection, transmission, and distribution of electricity to the customer's premises.
- It outlines the rights, responsibilities, and obligations of both parties. In addition, the agreement outlines the effective date and duration of its applicability, setting the temporal boundaries within which its provisions are enforceable.

- Key aspects covered include the services to be provided by Eskom, encompassing transmission and distribution, as well as the corresponding obligations of the customer, such as payment for electricity consumption and adherence to safety regulations.
- Tariffs, payment terms, and methods are stipulated to establish the financial parameters of the arrangement. Provisions for force majeure events address circumstances beyond the parties' control that may impact performance, while clauses on damages and liability outline each party's responsibility in case of losses incurred.
- Both Eskom and the customer provide representations and warranties regarding their legal capacity, authority, and compliance with laws. Confidentiality obligations govern the exchange of sensitive information, ensuring its protection and limited disclosure.
- The agreement represents the entire agreement between the parties, superseding any previous negotiations or agreements, with strict requirements for any variations or modifications. Waiver provisions stipulate that waivers must be made in writing and signed by both parties. Additionally, the agreement clarifies that it does not establish a partnership or agency relationship between ESKOM and the customer.

5.4 PENDING CHANGES IN THE LAW

Below we provide a brief summary of some of the legal and regulatory changes that are in process, and which may impact on the Project depending on the timing of the coming into effect of the legislation referred to.

5.4.1 THE PUBLIC PROCUREMENT BILL, 2023

The Public Procurement Bill, currently in the form known as B18B-2023, was first issued to the public for comment in early 2020. The Public Procurement Bill is aimed at regulating procurement by organs of state by introducing a single regulatory system for procurement for national, provincial and local government departments, as well as constitutional institutions and public entities. Once enacted, the Public Procurement Bill will replace certain sections of the Public Finance Management Act 1 of 1999 (“**PFMA**”) and the MFMA, among other statutes, and will repeal the PPPFA in its entirety.

Among the changes to be introduced in the Public Procurement Bill is the establishment of the Public Procurement Office, which has the power to issue binding instructions and non-binding guidelines on any procurement matter. Although we are not certain of the kinds of guidelines

and instructions to be issued by the Public Procurement Office, organs of state need to be cognisant that the Office may prescribe certain uniform norms and standards, with which organs of state must comply in their procurement processes.

There is some uncertainty in the Public Procurement Bill as to the extent to which individual procuring institutions, such as the Municipality, will be responsible for drafting and approving their own supply chain management and preferential procurement policies, as opposed to those being prescribed by the Minister of Finance. Either way, the Municipality's entitlement to design its own policies will be limited to the extent that aspects thereof are prescribed in the Public Procurement Bill itself, and by the Minister of Finance in regulations.

Chapter 4 of the Bill regulates preferential procurement, and states that a procuring institution must implement a preferential procurement policy which provides for: (a) categories of preference in the allocation of contracts; and (b) the protection or advancement of persons or categories of persons disadvantaged by unfair discrimination, as envisaged in section 217 of the Constitution. Chapter 4 has been redrafted by the National Treasury since the Public Procurement Bill was published for public comment, to provide for a number of mechanisms aimed at giving effect to the objectives of preferential procurement, including set-asides, prequalification criteria, subcontracting requirements, and local content designations. It is unclear exactly how these various mechanisms will be applied relative to each other and relative to other evaluation criteria such as functionality and price.

The Public Procurement Bill was passed by the National Assembly on 6 December 2023, and after consideration and amendment by the National Council of Provinces was referred back to the National Assembly for reconsideration and approval. The National Assembly passed the amended Bill on 16 May 2024 and it is now awaiting assent and signature by the President.

5.4.2 THE ELECTRICITY REGULATION AMENDMENT BILL, 2023

The Electricity Regulation Amendment Bill, currently in the form B23B-2023, aims to introduce significant amendments to ERA. The Bill's main purpose is arguably to provide for the establishment, duties, powers and functions of the Transmission System Operator SOC Ltd and transitional measures (including the assignment of the duties, powers and functions of the Transmission System Operator SOC Ltd to the National Transmission Company South Africa SOC Ltd, which will be a subsidiary of Eskom upon implementation of the legal separation of Eskom's transmission division); and to provide for an open market platform that allows for competitive electricity trading.

The Bill also introduces extensive amendments to section 34 of ERA, including removing the requirement of NERSA concurrence in a Ministerial determination and replacing it with a consultation requirement, and clarifying that a section 34 determination is not a precondition to electricity licensing.

In relation to the market operator functions of the anticipated Transmission System Operator SOC Ltd, B23B-2023 provides in a proposed new section 34B of ERA, as follows:

“(3) A market operator must—

(a) provide for a transparent, non-discriminatory trading platform, approved by the Regulator, for power market participants to trade;

(b) develop a market code and rules, including qualifying criteria for power market participants approved by the Regulator; and

(c) the market code shall include, but is not limited to, provisions related to the following:

(i) the different types of markets necessary to ensure effective and secure operation of the industry including both physical and financial transactions between power market participants in the appropriate timescales, to enable the market transactions and regulated transactions;

(ii) the method of operation, as well as development of systems, processes and procedures for the implementation of these markets;

(iii) provisions for reconciliation in order to identify imbalances between scheduled and actual production, the consumption of electricity by power market participants, and the allocation of costs of remedial action and penalties where applicable;

(iv) the qualifying criteria for power market participants, including financial and prudential requirements;

(v) governance of the market code, including mechanisms for power market participants and stakeholders to propose changes to the code; and

(vi) any other aspects necessary for effective and efficient market operation.

(4) A transparent, non-discriminatory trading platform and trading mechanism for power market participants referred to in subsection (3)(a) is envisaged to be a competitive multi-market structure, which provides for market transactions, physical bilateral transactions and regulated transactions.”

The Municipality, as a purchaser of electricity required for supply to its customers, will potentially be a “power market participant”. In order to participate as such, it will have to meet the eligibility requirements for power market participants.

Buyers which concluded long-term PPAs before the market platform anticipated in B23B-2023 becomes operational will continue to be bound by those PPAs notwithstanding the existence and functioning of that market platform. Thus, although the Municipality may become eligible during the term of the Project to participate in the anticipated electricity market, its commitments under the Project PPAs will have to be met for the full terms of those PPAs.

As at 16 May 2024, the Electricity Regulation Amendment Bill has been passed by the National Assembly and the National Council of Provinces, and awaits assent and signature by the President.

6. SOCIO ECONOMIC DEVELOPMENT ASSESSMENT

6.1 OVERVIEW

The Municipality has adjusted its approach to preferential procurement. The 2022 PPPFA Regulations require organs of state to determine their own preferential procurement policies until potential superseding legislation is passed-. However, such policies must be in accordance with section 2 of the PPPFA and the 2022 Regulations.

The prevailing PPPFA legislation and regulations allows organs of states to award preference points for price and specific goals. The value of this Project will exceed R50 million, requiring the Municipality to use the 90/10 preference points system – where 10 points can be awarded for specific goals. The value of the Project is based on the estimated total value of the Power Purchase Agreement (“PPA”). Specific goals include contracting with historically disadvantaged persons and implementing programmes of the RDP.

The Municipality’s current approach to awarding preference points for specific goals considers B-BBEE level and locality: at least 50 percent for the B-BBEE contributor status level of the tenderer and a maximum of 50 percent for the location of the business offices of the tenderer. Under a 90/10 preference points system, where 50% of the points are awarded for B-BBEE level and 50% of the points are awarded for locality, 5 points would be awarded to a Level 1 B-BBEE Contributor, and 5 points would be awarded to a tendering business located within the Municipality.

It would be administratively simple to apply the Municipality’s approach to preference points to this Project, but it would likely do little to promote meaningful, broad-based socio-economic benefit. If preference points are awarded for locality it is conceivable that bidders may opportunistically create a notional business presence in the municipality, which would defeat the objective of rewarding businesses that are making a genuine contribution to the local economy of the municipality. As for awarding preference points for a bidder’s B-BBEE level, such an approach would only reward bidders for their ownership structure. This B-BBEE scoring outcome is a function of project finance conventions, where successful bidders will establish brand new, ring-fenced legal entities to build, own and operate the energy generation asset. This entity will have no historical track record on which to determine a B-BBEE contributor level, nor will the entity directly employ any people. As such, only the ownership composition of the entity at bid (whether incorporated or not) can be used to determine its B-BBEE level. Furthermore, it is possible (but probably unlikely) that qualified bidders could elect to be B-BBEE “non-compliant” and only compete on price.

It would be unwise to ignore the precedents set by South Africa’s REIPPPP. The REIPPPP has established a ~12-year precedent for promoting broad-based socio-economic benefit through large-scale energy procurement. One key precedent is promoting a visible

benefit to the people living and the businesses operating within the vicinity of the IPP projects. These benefits come in the form of employment on the construction site, selling goods and services to the project and social infrastructure investments. There are at least 11 operating REIPP projects within the Western Cape Province, with communities who have derived such benefits – with five more projects currently under construction in the Province. It is reasonable to assume that local communities near the construction of large-scale renewable energy power plants will a) expect a measure of benefit; and b) will be unconcerned about the precise contracting modalities of the Project e.g., where it is a municipal IPP or an IPP procured by the DMRE's REIPPPP.

There are three options available to address the limitations of Stellenbosch's preference scoring and to mitigate local community risk in this Project: 1) amend the Municipality's Preferential Procurement Policy to make provision for creating an expanded preference scoring system for this Project; 2) use "objective criteria" related to socio-economic development in the assessment of bid responses; and 3) include contractual obligations related to socio-economic development as a condition of bid award.

The Municipality can introduce strategic flexibility into its approach to preferential procurement by amending, or crafting an addendum to, its Preferential Procurement Policy. Making changes is possible, while still being compliant with the PPPFA and the PPPFA Regulations (2022). Other municipalities in the region have more flexible policies than Stellenbosch. The City of Cape Town SCM Policy does not stipulate the specific goals for preference point scoring, which allows for flexibility in crafting tender documents.⁴¹ Saldanha Bay Local Municipality has amended its preferential procurement policy in a way that appears to provide for an expansion ("phased in approach") of how programmes of the RDP are used as specific goals for preference points.⁴²

Tailoring preference points to align with programmes of the RDP offers maximum flexibility. Three of the five RDP programmes are relevant: 1) Meeting Basic Needs; 2) Developing Human Resources; and 3) Building the Economy. Within these programmatic areas there is a wide range of activities that could qualify.

The Municipality can specify "objective criteria" related to socio-economic development within the Request for Proposals (RFP) for this Project. Section 2(1)(f) of the PPPFA makes provision for awarding a contract to a bidder who does not score the highest

41 City of Cape Town. 2023. Supply Chain Management Policy (amended 26 JANUARY 2023 vide C09/01/23).

42 Saldanha Bay Preferential Procurement Policy, for implementation as from 19 January 2023.

points, by applying objective criteria in addition to those used in preference scoring. In this case, the Municipality can extract voluntary commitments by bidders related to the specified socio-economic development criteria – which can be brought to bear in the event of tied or marginal bid evaluation scores.

Alternatively, the Municipality can include contractual obligations related to socio-economic development as a condition of bid award. Such obligations would need to be specified within the RFP, would need to be forward-looking, and cannot be used as means of disadvantaging or disqualifying bidders.

There are pros and cons for each of the abovementioned three options for promoting broad-based socio-economic benefit in this Project. The pros and cons relate to a) impact on the procurement process and future contract management; b) likely behaviour by bidders; c) possible influence on the electricity tariff; and d) socio-economic development impact.

Indications are that the Municipality will need to apply its current preferential procurement policy to this Project procurement, in combination with contractual obligations related to socio-economic development. Amending the Municipality's preferential procurement policy, as a precondition for enabling the creation of a tailored preference points system for this Project, will likely introduce an undesirable delay in the procurement process. Note, it is not recommended that locality be considered as preference scoring dimension for this Project – given the reasons provided further above. Inserting contractual obligations related to socio-economic development will give the Municipality direct control over the nature and scope of the socio-economic development obligations of bidders and will promote outcomes that are preferred/ desired by the Municipality.

The design of the socio-economic development measures for the Project is based on a multi-criteria assessment - whether the Municipality chooses to promote programmes of the RDP through the bid preference scoring system or if the Municipality inserts socio-economic development obligations into the Project contract.

By applying the assessment criteria to ten common socio-economic development measures, a shortlist of measures are prioritised for their suitability to this Project:

- Creating **employment** in the construction programme and power plant operations;
- Spend on **skills development** of historically disadvantaged individuals;
- Building specified **social infrastructure** for local community benefit; and
- Spend on **social well-being programmes**.

Each of the above measures is recommended for incorporation in the Project, for the benefit of the local community. Specifically, incorporated as a condition of award for the IPP, with defined obligations for each socio-economic development measure. It is estimated

that these measures, as envisaged, will have a negligible impact on the electricity tariff i.e., 1 cent per kWh.

Finally, it may be necessary to adjust the recommended preferential procurement approach for the Project. This is because the Public Procurement Bill (PPB) 2023 could be enacted around the targeted release of the Project procurement documents, currently estimated to be released in August 2024. The odds of the PPB 2023 being promulgated are difficult to estimate. Further, should PPB 2023 be enacted, it is our expectation there will be a time delay associated with possible Court challenges and the Minister of the dtic determining and declaring the minimum thresholds for various preference categories, followed by each organ of state adjusting their Preferential Procurement Policy to reflect the framework in the PPB 2023 and the published thresholds. Importantly, it is our view that the socio-economic development recommendations of this Feasibility Report do not contradict or run counter to the essential framework of PPB 2023.

6.2 STATUS OF PREFERENTIAL PROCUREMENT: NATIONAL LEVEL

Under the PPPFA, government entities must establish preferential procurement policies within a specified framework. The PPR 2022, which replaced the PPR 2017, guide the allocation of preference points based on price and specific goals.

Specific goals under Section 2(1)(d) of the PPPFA include:

- i. Contracting with historically disadvantaged individuals based on race, gender, and disability.
- ii. Implementing RDP programmes as outlined in Government Gazette No. 16085.

To allocate preference points, it must first be decided whether to apply the 80/20 or 90/10 preference point system⁴³, wherein 80 or 90 points are awarded for price, respectively, and the remaining points are assigned to specific goals. Points allocation must be detailed in the tender document, including the required evidence for claims.

Confusion arose from National Treasury's guidance that B-BBEE Contributor Status Level should not be a specific goal. This was challenged by the construction industry, as entities with high B-BBEE levels faced additional efforts to secure preference points under the new regulations. Finance Minister Enoch Godongwana clarified that B-BBEE remains important in

⁴³ The 80/20 preference point system applies to tenders valued up to R50 million, whereas the 90/10 preference point system is used for tenders exceeding R50 million.

tender evaluations and should align with the B-BBEE Act 53 of 2003 and Section 2 of the PPPFA. The PPB 2023 is expected to resolve these conflicts.⁴⁴

Organs of state can define specific goals based on their socio-economic objectives, but these goals should only be used to award points, not as disqualification criteria. For example, points can be allocated for subcontracting to SMMEs owned by historically disadvantaged individuals or for socio-economic RDP programmes.

The RDP establishes long term socio-economic objectives centred around five key programmes, namely:

Table 6-1 Key programmes identified by the RDP

RDP Key Programme	Summary Description
Meeting Basic Needs	Create large-scale infrastructure to meet the basic needs of people related to livelihoods, housing, water and sanitation, energy, transport, health, the environment, social welfare and security - which will also stimulate the economy.
Developing Human Resources	Support human resource development throughout the education system, industry as well as in the home, to increase the productive, creative and sporting capacity of people.
Building the Economy	Develop a large manufacturing sector that makes greater use of our raw materials and minerals. Increase peoples' participation in the economy; secure worker rights; and create participative labour structures at national, industry and workplace levels. Cooperate with Southern African neighbours for mutual economic benefit.
Democratizing the State and Society	Increase efficiency, productivity, and accountability within the public service and democratic institutions.
Implementing the RDP	Mobilise participation of a wide range of social organisations and institutions.

6.3 STATUS OF PREFERENTIAL PROCUREMENT IN THE MUNICIPALITY

In accordance with the amendments outlined in the PPR 2022, the Municipality has revised its Preferential Procurement Policy to specify the allocation of a maximum of 20 points (in the

⁴⁴ Further detail on the PPB 2023 is provided in Section 6.4.2.

80/20 preference point system) or 10 points (in the 90/10 preference point system) for specific goals. These specific goals include:

- (a) Contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability.
- (b) Promotion of enterprises located in the municipal area (WCO24).

As outlined in the Municipality's Preferential Procurement Policy 2023/2024, a minimum of 50% of the 20/10 points must be assigned to the advancement of specific goal (a). These points are distributed based on the B-BBEE scorecard of the tenderer as per **Table 6-2**.

Table 6-2 Allocation of points as per B-BBEE Scorecard, Stellenbosch Municipality

B-BBEE Status Level	Number of Points for 80/20 Preference Points System	Number of Points for 90/10 Preference Points System
1	20	10
2	18	9
3	16	8
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant	0	0

A maximum of 50% of the 20/10 points must be directed towards the advancement of specific goal (b). The distribution of points for this goal is outlined in **Table 6-3**.

Table 6-3 Allocation of points for locality, Stellenbosch Municipality

Locality of supplier	Number of Points for 80/20 Preference Points System	Number of Points for 90/10 Preference Points System
Within the boundaries of the Municipality	20	10
Outside of the boundaries of the Municipality	0	0

In the event of a tie in points between two or more tenderers, the contract must be awarded to the tenderer who obtained the highest number of points for specific goals.

6.4 OTHER PREFERENTIAL PROCUREMENT CONSIDERATIONS

The following subsection provides an overview of additional preferential procurement considerations that may influence the inclusion of socio-economic development criteria in the Project.

6.4.1 PRECEDENTS SET BY REIPPPP

The REIPPPP has set significant precedents in the energy sector, particularly in what the Programme refers to as "Economic Development". The Western Cape currently hosts 11 operational REIPPPP projects, with five more under development, representing substantial investment in renewable energy infrastructure.⁴⁵

The operational projects originated from the initial four bid windows, where evaluation criteria allocated 70% weight to price and 30% to ED criteria, resulting in significant commitments to job creation, local content, ownership, management control, preferential procurement, enterprise development, and socio-economic development. Key qualification requirements included 40% South African Entity Participation and a Level 5 B-BBEE Contributor Status, which evolved over subsequent bidding rounds.⁴⁶ It is worth noting that the Implementation Agreement for Bid Window 5 introduced a new provision (maintained in subsequent rounds) which gives the Regulator the option to request a diversion of an IPP's socio-economic development funds to nominated initiatives.

The stringent ED requirements in the REIPPPP have fostered high community expectations for economic benefits from IPP projects. Communities often expect similar benefits from both REIPPPP and non-REIPPPP projects, posing a risk of dissatisfaction and unrest if ED elements are excluded or reduced. Such unrest could lead to project implementation delays, posing significant challenges for stakeholders involved.

Given the above, the REIPPPP has established standards for Project owners and EPC Contractors, who often engage specialists or create in-house capacity to meet ED obligations. This includes local recruitment, local procurement, grievance mechanisms, and consulting with local authorities on socio-economic initiatives.

⁴⁵ A map of the geographical distribution of the operational REIPPPP projects in the Western Cape is provided in **Annexure D**.

⁴⁶ An overview of how ED criteria have evolved in the REIPPPP may be found in **Annexure D**.

The REIPPPP has also influenced large-scale private IPPs, encouraging similar ED approaches and contractual obligations. ED is seen not just as compliance but as a proactive risk mitigation strategy, securing a social license to operate and aligning with broader corporate objectives to foster positive community relationships.

6.4.2 INTRODUCTION OF THE PUBLIC PROCUREMENT BILL

The PPB 2023 aims to replace and repeal the PPPFA, consolidating various legislation related to public procurement into a unified framework. This includes acts such as the Preferential Procurement Policy Framework Act, Public Finance Management Act, Local Government: Municipal Finance Management Act, Broad-based Black Economic Empowerment Act, and Prevention and Combating of Corrupt Activities Act.

The PPB 2023 introduces revised mechanisms for preferential procurement, including set-asides, pre-qualification criteria, subcontracting, and local production and content. Procuring institutions are directed to apply their own criteria only when other mechanisms are not applicable.

The latest version of the PPB 2023 was passed by National Assembly on December 6 2023, and is currently under debate and concurrence in the National Council of Provinces. Should the PPB 2023 come into effect before the Project's procurement process begins, economic development measures will need to align with the provisions outlined in the bill – or at least not be at odds with PPB 2023. Given the legislative timeline, it is possible that the PPB 2023 may be passed before the end of the Sixth Parliamentary term in mid-May 2024.

6.4.3 APPLICABILITY OF THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAMME (NIPP)

The MER Programme Report suggested that additional to the requirements of the PPPFA the National Industrial Participation Programme (“**NIPP**”) may apply to the Project. Championed by the dtic, the NIPP obliges suppliers of goods and services to Government with imported content equal to or exceeding \$10 million to undertake supportive economic activities to the value of 30% of the imported value (the dtic, 2013).

Unlike in Treasury Regulation 16A, the NIPP is not referred to in the Municipal SCM Regulations. There is also no Municipal Bidding Document (“**MBD**”) equivalent of Standard Bidding Document (“**SBD**”) 5, a bidding form specific to the NIPP.

In the 2013 NIP Guidelines there is no express provision binding municipalities. Furthermore, NIPP is not referred to in the Municipality's Supply Chain Management policy.

Finally, the nature of the procurement from this Project differs from a conventional infrastructure procurement. The Municipality will be buying electricity and not the equipment

and materials which are used to produce it. The definitions of “imported content” and “local content” in the NIP Guidelines do not clearly correlate to a portion of the electricity tariff that would be paid for electricity under a PPA.

Given that the NIPP has not been given binding effect through legislation or regulations, insofar as municipalities are concerned, and given that it is arguable that the purchase of electricity by the Municipality does not involve the purchase of goods or services with imported content, we are of the view that NIPP does not apply to the Project.

6.4.4 ALIGNMENT WITH REGIONAL PRIORITIES

The Project’s pursuit of ED objectives should be closely aligned with the strategic directions outlined by the Municipality and the broader WCG. The analysis of strategic documents from the Municipality, the Cape Winelands District and the WCG⁴⁷ reveals several shared elements that are pivotal in guiding the selection of appropriate socio-economic development measures for the Project.

These elements encompass various key areas, including facilitating the growth of local businesses, fostering the creation of employment opportunities, nurturing emerging entrepreneurs, enhancing social infrastructure, bolstering local capacity and skills development initiatives, and fostering the establishment of sustainable communities. It is imperative to consider and integrate these shared priorities when determining the most suitable socio-economic development measures to be incorporated into the Project.

By aligning with these overarching strategic objectives, the Project can ensure its initiatives effectively contribute to the economic advancement and sustainable growth of the local community, thereby maximizing its positive impact and fostering long-term prosperity.

6.5 MECHANISMS FOR INCORPORATING SOCIO-ECONOMIC DEVELOPMENT IN THE PROJECT

The following subsection provides an analysis and comparison of the four mechanisms for including socio-economic development considerations in the Project. Each option presents its own set of advantages and challenges, emphasizing the need to carefully consider the trade-offs between administrative simplicity, socio-economic impact, and procedural integrity.

⁴⁷ A summary of these documents is provided in **Annexure D**.

6.5.1 OPTIONS AVAILABLE TO THE MUNICIPALITY

6.5.1.1 *Option 1: Maintain status quo.*

The first option entails using the Municipality's current preferential procurement scoring system. That is, allocating the 10 points available for socio-economic development towards the B-BBEE contributor status level of the tenderer.

This approach is beneficial in that it simplifies the RFP documentation and bid evaluation process by avoiding the need for any changes to the approach currently applied by the Municipality. Moreover, the Municipality is not burdened with any additional contract management obligations related to socio-economic development.

There are notable disadvantages associated with the option, however. Firstly, the allocation of preference points based on a bidder's B-BBEE level essentially rewards bidders solely for their ownership structure. This is due to B-BBEE scoring outcomes being a function of project finance norms, wherein successful bidders typically establish newly formed, ring-fenced legal entities to oversee the development, ownership, and operation of the energy generation asset. These entities lack any historical track record for determining a B-BBEE contributor level, and they do not directly employ individuals. Consequently, only the ownership composition of the entity at the bidding stage, whether legally incorporated or not, can be utilised to ascertain its B-BBEE level.

Another disadvantage of this option is that, unlike REIPPP projects in the Western Cape, this option fails to address potential risks of local community unrest during project implementation. Lastly, this option allows bidders to compete solely on price without needing to demonstrate pre-existing B-BBEE credentials or other commitments.

Balancing the administrative simplicity of the current approach with the need to promote broader socio-economic benefits and mitigate community-related risks is essential when considering this option.

6.5.1.2 *Option 2: Utilise an expanded preference scoring system, including the allocation of preference points for commitments associated with programmes of the RDP.*

Option 2 involves expanding the Municipality's current approach to preferential procurement by adjusting or creating an addendum to its Preferential Procurement Policy. Such modifications can be made in accordance with the PPPFA and the PPPFA Regulations (2022), allowing for strategic flexibility.

Notably, neighbouring municipalities, such as those in the City of Cape Town and Saldanha Bay, have more flexible policies. Unlike Stellenbosch, the City of Cape Town's SCM Policy does not outline specific preference point scoring objectives, enabling greater flexibility in their tender documents. Saldanha Bay LM has amended its preferential procurement policy,

seemingly expanding the utilization of RDP programmes as targeted goals for preference points, employing a "phased-in approach".

Aligning preference points with RDP programs offers significant flexibility, with three key RDP programs being particularly relevant: 1) Meeting Basic Needs; 2) Developing Human Resources; and 3) Building the Economy. Within these areas, there exists a wide array of qualifying activities that may be leveraged by the Project to bring about socio-economic benefits in the Municipality.

The option to expand the Municipality's current Preferential Procurement Policy is advantageous in that it enables the design of preference criteria that prioritise broader socio-economic development objectives and enhance local community risk management. Additionally, this approach is less likely to distort the market, allowing bidders to leverage their strengths while minimising potential negative impacts on electricity tariffs.

However, there are challenges associated with this option. Implementing an expanded preference scoring system requires amending the Municipality's Preferential Procurement Policy, which could potentially delay the issuance of the RFP. Moreover, similar to Option 1, there is a risk that bidders may choose to compete solely on price, neglecting socio-economic development credentials or commitments. Finally, integrating forward-looking commitments into the scoring system necessitates the establishment of performance reporting and penalty mechanisms, adding complexity to the procurement process.

6.5.1.3 Option 3: Use "objective criteria" related to socio-economic development in the assessment of bid responses, in the event of tied or marginal bid evaluation scores.

Option 3 includes the use of "objective criteria". Section 2(1)(f) of the PPPFA makes provision for awarding a contract to a bidder who does not score the highest points, by applying objective criteria in addition to those used in preference scoring. In this option, the Municipality can specify objective criteria related to socio-economic development within the RFP for this Project.

By incorporating such criteria, the Municipality can encourage bidders to voluntarily commit to socio-economic initiatives, motivated by the desire to enhance their bid competitiveness in scenarios where bid evaluation scores are closely contested. In this way, additional socio-economic criteria are committed to by bidders without the need to amend the Municipality's Preferential Procurement Policy.

There are however potential challenges associated with this option. Bidders may contest the use of objective criteria for extracting socio-economic commitments, viewing it as a misuse of the evaluation process, which could lead to procurement delays. Additionally, implementing this approach requires the establishment of performance reporting and penalty mechanisms to ensure compliance with forward-looking commitments, thereby introducing complexity.

6.5.1.4 Option 4: Include contractual obligations related to socio-economic development as a condition of bid award.

The last option includes the use of contractual obligations concerning socio-economic development as a condition of award. These obligations must be clearly outlined within the RFP, must be forward-looking, and cannot be used to unfairly disadvantage or disqualify potential bidders. The contractual obligations do not form part of the bid evaluation process.

By embedding such commitments into the bidding process, the Municipality can proactively ensure that the selected bidder aligns with its preferred socio-economic development objectives, thereby maximizing the positive impact of the project on the local community. This option also prevents the selection of bidders solely based on financial considerations, ensuring that socio-economic credentials (B-BBEE Level) and forward-looking commitments are taken into account.

This option has several drawbacks to consider, however. Firstly, by removing “demand signals” from the bidding process, it could potentially result in obligations that either have a negative impact on the tariff or limited socio-economic benefit. Secondly, implementing such obligations requires establishing performance reporting and penalty mechanisms, which can introduce complexity.

Finding the right balance between ensuring bidder compliance and maintaining Project feasibility is crucial in implementing this option effectively. Careful design of the contractual conditions is key.

6.5.2 BENEFITS AND DISADVANTAGES OF EACH OF THE OPTIONS

Table 6-4 summarises the benefits and disadvantages of each option.

Table 6-4 Comparison of Mechanisms for Incorporating SED

Option	Pros	Cons
Option 1: Maintain Status Quo	<ol style="list-style-type: none"> 1. No changes to the Municipality's procurement policy simplifies RFP documentation and bid evaluation. 2. No contract management obligations related to socio-economic development are imposed on the Municipality. 	<ol style="list-style-type: none"> 1. Allows bidders to compete solely on price without pre-existing B-BBEE credentials or commitments, albeit with a low probability of occurring. 2. B-BBEE level of the ring-fenced legal entities of bidders is based only on the ownership profile of the entity - thereby only promoting a narrow BEE benefit. 3. Fails to mitigate potential risks of local community unrest during

Option	Pros	Cons
		project implementation, unlike REIPPP projects in the Western Cape.
Option 2: Utilise an expanded preference scoring system	<ol style="list-style-type: none"> 1. Allows for designing preference criteria for broader socio-economic development and effective local community risk management. 2. Less likely to distort the market as it enables bidders to play to their strengths and minimizes potential negative impacts on electricity tariffs. 	<ol style="list-style-type: none"> 1. Requires amendment to the Municipality's preferential procurement policy, potentially delaying RFP issuance. 2. Allows bidders to compete solely on price without socio-economic development credentials or commitments, albeit with a low probability of occurring. 3. Forward-looking commitments necessitate performance reporting and penalty mechanisms, adding complexity.
Option 3: Use "objective criteria" related to SED.	Can extract voluntary socio-economic commitments from bidders, as they aim to avoid being disadvantaged in a tied or marginal bid evaluation scoring outcome.	<ol style="list-style-type: none"> 1. May be challenged by bidders as a misuse of "objective criteria," potentially delaying procurement. 2. Requires performance reporting and penalty mechanisms and reporting for forward-looking commitments, adding complexity.
Option 4: Include contractual obligations related to socio-economic development as a condition of bid award.	<ol style="list-style-type: none"> 1. Avoids a scenario in which a bidder is preferred in the absence of any socio-economic credentials or forward-looking commitments. 2. Gives Municipality control over socio-economic development obligations, promoting desired outcomes like local community benefit. 	<ol style="list-style-type: none"> 1. Removes demand signals from bidding process, potentially resulting in obligations that either have a negative impact on the tariff or limited socio-economic benefit. 2. Necessitates performance reporting and penalty mechanisms, adding complexity.

It is recommended that the Municipality utilise its existing preferential procurement policy alongside contractual obligations pertaining to socio-economic development for this Project's procurement process.

Introducing contractual obligations concerning socio-economic development will afford the Municipality direct oversight over the nature and extent of bidders' socio-economic responsibilities, thereby fostering outcomes aligned with the Municipality's preferences and objectives. This approach empowers the Municipality to shape the socio-economic development landscape of the project, ensuring that it aligns with the desired community risk management outcomes.

6.6 SOCIO-ECONOMIC DEVELOPMENT MEASURES FOR THE PROJECT

6.6.1 OVERVIEW OF MEASURES CONSIDERED

There are ten socio-economic development measures that are commonly promoted within large scale infrastructure projects in South Africa:

- Job creation and the labour intensity thereof.
- Local content in the construction programme.
- Historically Disadvantaged Individual (“HDI”)⁴⁸ ownership in the IPP.
- HDI representation in the IPP management structure.
- Procurement spend on HDI-owned and small enterprises.
- Enterprise/ Supplier development spend on HDI-owned and small enterprises.
- Skills development spend on HDIs e.g. bursary programme, internship programme.
- Social infrastructure investments e.g. road, clinic, community centre, sports facility, PV installation on housing, water provision.
- Spend on social well-being programmes e.g. school children feeding and transportation; behavioural change related to sexual activities, substance abuse, inter-personal violence, nutrition.
- Maintenance of B-BBEE Level over the PPA term.

⁴⁸ HDI = Historically Disadvantaged Individuals (e.g. black people, youth, women)

Each of these measures promotes different socio-economic development outcomes, with different timeframes associated with generating impact, and different cost implications. As such, not all measures are suitable for this Project.

6.6.2 ASSESSMENT OF SOCIO-ECONOMIC DEVELOPMENT MEASURES

The design of the socio-economic development measures for the Project is based on a multi-criteria assessment - whether the Municipality chooses to promote programmes of the RDP through the bid preference scoring system or if the Municipality inserts socio-economic development obligations into the Project contract.

For this Project, preferred measures are those that help mitigate local community risk and do not negatively impact the tariff, bankability and contract management. As such, the following assessment criteria were devised to assess the suitability of each of the socio-economic development measures for this Project:

- **Favours vulnerable segments of society:** socio-economic development should ideally be broad-based and promote sustainable outcomes.
- **Additionality:** the socio-economic development outcome would not have otherwise happened in the normal course of business.
- **Opportunity for local community benefit:** the proximity of the project to pre-existing human settlements necessitates consideration of local community risk management e.g. employing municipal residents/ local community members in the construction programme and power plant operations.
- **Low negative impact on the electricity tariff:** some activities are known to have a straight-line relationship between their cost and the electricity tariff.
- **Low negative impact on Project bankability:** the socio-economic development measure should not compromise the ability of banks to finance the Project.
- **Contract management burden:** different socio-economic criteria impose a variable compliance burden for ongoing contract management.

By applying these six assessment criteria to the ten common socio-economic development measures, a shortlist of measures can be prioritised for their suitability to this Project. The Table 6-5 below provides a summary of the suitability assessment.

The assessment is based primarily on insights gleaned from the REIPPPP. The assessment is based on estimated average implementation behaviour and does not account for targeted design scenarios e.g. minimum local content thresholds on specific components, or deliberately targeting specific demographics and localities. The assessment assumes that the IPP is responsible for quarterly performance reporting, which it certifies as true and accurate. Furthermore, the IPP is required to procure an annual independent audit of its reported achievement.

Table 6-5 Suitability assessment of socio-economic development measures

	Job creation	Labour intensity of job creation	Local content in construction programme	HDI ownership in the IPP	HDI representation in the IPP management structure	Procurement spend on HDI-owned and small enterprises	Enterprise/Supplier development spend on HDI-owned and small enterprises	Skills development spend on HDIs	Social infrastructure investments	Spend on social well-being programmes	Maintenance of B-BBEE Level over PPA term
Favours vulnerable segments of society	High	High	Low	Low	Low	Medium	Medium	Medium	High	High	Medium
Additionality of the socio-economic objective	Medium	High	Medium	Medium	Medium	Medium	High	High	High	High	Medium
Opportunity for local community benefit	High	High	Low	Low	Low	Medium	Medium	High	High	High	Medium
Negative impact on electricity tariff	Low	Medium	Medium	Medium	Low	Medium	Medium	Medium	High	High	High
Negative impact on project bankability	Low	Low	Medium	Medium	Low	Low	Low	Low	Low	Low	Low
Contract management burden	Low	Low	Low	Low	Low	Low	Medium	Medium	Medium	Medium	Low
Positive count	5	5	1	1	3	2	2	3	4	4	2
Negative count	0	0	-2	-2	-2	0	0	0	-1	-1	-1
Net result	5	5	-1	-1	1	2	2	3	3	3	1
Rank	1	1	10	10	8	6	6	3	3	3	8

Note: green shading is positive and red shading is negative. A high rating for the first three criteria is positive, whereas a high rating for the second three criteria is negative.

Scoring explanation:					
Green shaded	+1	Yellow shaded	0	Red shaded	-1

The outcome of this suitability assessment reveals four preferred socio-economic development measures. Each of these measures are well-suited for generating benefits within the local community:

- Creating **employment** in the construction programme and power plant operations, and maximising the labour intensity of the Project's employment e.g. person months per MW installed;
- Spend on **skills development** of HDIs;
- Building specified **social infrastructure** for local community benefit; and
- Spend on **social well-being programmes**.

Of the four preferred measures, hiring workers from the local community does not result in an increased cost to the Project – unless IPPs are incentivised or required to create more local jobs than they reasonably can achieve. The REIPPPP is the primary reference point for understanding the scope for local employment and the potential cost of the Project incurring costs related to skills development, social infrastructure and social well-being programmes. Published data for Rounds 1 to 4 of the REIPPPP indicate that 58.43% of total job years created are local community jobs, and Socio-Economic Development contributions amount to an average of 1.3% of IPP revenue.⁴⁹

Using one of the modelled scenarios for this Project, 1% of nominal revenue over 20 years amounts to ~R43m. This additional cost would result in an R0.0103/kWh increase on the base case average tariff over the term. In other words, for R43m of socio-economic development spending the premium paid on the electricity tariff is 1 cent per kWh. Note, the modelled scenario is for a 52,1 MWp plant, over four connection points.

Investments in social infrastructure add complexity to the Project. Arguably it is unreasonable to expect an IPP to successfully oversee the design, construction and operation of infrastructure that is outside the Project site and is unrelated to the renewable energy infrastructure. However, if the Project is within or nearby the municipal boundary, a potentially viable alternative would be for the Municipality to reserve the right to divert a proportion of the Project's socio-economic development spending to municipal IDP-mandated social infrastructure investments. The logic underpinning this proposal would be to extract a

⁴⁹ Independent Power Producers Office, 2023. Independent Power Producers Procurement Programme (IPPPP), An Overview, as at 31 March 2023.

Stellenbosch-specific benefit with a neutral impact on municipal rate payers i.e. the project would be paid for by rate payers by other means, if it were not through the electricity tariff.

6.7 RECOMMENDATIONS

The Municipality should apply its current preference points system to the bid evaluation for this Project.

The Municipality should award a maximum of 10 points for the B-BBEE Level of the bidder. A 90/10 preference points evaluation system is envisaged since the estimated total value of the 20-year PPA will exceed R50 million. A B-BBEE certificate by a SANAS-approved accreditation agency is required as evidence and should be for the legal entity (whether incorporated or not) that will own the Project and sell the electricity. The B-BBEE Codes of Good Practice, 2013 (amended) provide a clear framework measuring the B-BBEE Contributor Level of incorporated entities and unincorporated entities/ joint ventures. Furthermore, the Codes indicate that entities tendering for contract values that exceed R50 million cannot be measured as “start-up enterprises”, thereby disallowing the submission of Exempted Micro Enterprise/ Qualifying Small Enterprise BEE affidavits as proof of compliance with the B-BBEE certificate requirement.

The Municipality should include three socio-economic development measures as a condition of award, the details of which will be included in the contract with the IPP. The measures are proposed as follows:

- **Job creation:** 40% of the total person months over the course of the construction phase should be delivered by members of the local community, and 50% of the total person months over the course of the operating phase should be delivered by members of the local community.
- **Skills development:** 0.2% of the total 20-year PPA revenue should be spent on internships and bursaries related to post-secondary school education and training, to improve the employability of local community members.
- **Social spending** (i.e., social well-being programmes and social infrastructure): 0.8% of the total 20-year PPA revenue should be spent on activities that improve the quality of life of the local community. This social spending is for the benefit of the local community, irrespective of the Project’s geographic location. However, social infrastructure investments, in contrast with social well-being programmes, can only be made within the Stellenbosch Municipal boundary. Social infrastructure investments must be approved and appear in the Stellenbosch Municipality IDP in order to qualify. Furthermore, such a social infrastructure investment is premised on the Municipality activating a contractual right to divert a portion of the IPP’s social spending to the IDP-mandated infrastructure.

The value of such social infrastructure investments is capped at a maximum of 50% of the total value of this socio-economic development measure (“social spending”). The IPP would reserve the right to influence the choice of social infrastructure project or refuse the social spending diversion, based on a local community risk analysis by the IPP i.e. the IPP can justify that the spending diversion would compromise its local community risk mitigation efforts. In the event the IPP agrees, it would make a capital transfer to the Municipality to discharge its obligation. The modalities of this transfer would need to be worked out.

“Local community” is defined as verified residents of the Local Municipality in which the Project is located. This definition can be expanded in the following instances: in the event the Project site straddles the demarcated boundary of two Local Municipalities, or there is a second adjacent Local Municipality that incorporates a human settlement that reasonably could impact or be impacted by the Project.

To reduce the contract management burden on the Municipality, the IPP will be made responsible for quarterly performance reporting against its socio-economic development obligations, which it certifies as true and accurate. Furthermore, the IPP will be required to procure an annual independent audit of its reported achievement.

The recommended socio-economic development measures for the Project can support the following priority areas within key planning documents:

- Create an environment conducive to business development and **job creation**; Develop and implement a social infrastructure master plan for the **upgrading and maintenance of social facilities** in all wards. [Stellenbosch Municipality IDP 2022 – 2027 and Stellenbosch Municipality Top Layer Service Delivery and Budget Implementation Plan (SDBIP) 2023/24]
- Create an environment and forging partnerships that ensure **social and economic development of all communities, including the empowerment of the poor** in the Cape Winelands District. [Cape Winelands District Municipality (CWDM) 2022 – 2027]
- Strengthening youth-at-risk referral pathways and child and family-centred initiatives to **reduce violence; Creating opportunities for job creation through skills development**, including youth-centric development programmes and artisan training. [Western Cape Government Provincial Strategic Plan 2019 -2024]

7. PROCUREMENT PLAN

7.1 INTRODUCTION

The procurement plan comprises the following key aspects:

- Technical solution to be procured
- Regulatory and approval process
- Detail of the Project Team and their assigned functions
- The Project stakeholders and management during the procurement phase
- Outline of the procurement principles
- Potential procurement challenges that may affect the Project
- Quality assurance process for procurement documents
- Establishing an audit trail for the procurement process

7.2 TECHNICAL SOLUTION TO BE PROCURED

The STMIPPPP will be designed to facilitate the procurement of new generation capacity from either Option 1: Solar PV or Option 2: Solar PV and BESS (10 MWh), to contribute towards the strategic objectives of the Municipality. **The Municipality is required to select their preferred option.**

Table 7-1 outlines the maximum capacity for purposes of the STMIPPPP. The minimum individual project sizes making up the maximum capacity will be determined during the procurement phase.

Table 7-1 Recommended Options - Maximum Contracted Capacity for the Project

Technology	Maximum Contracted Capacity* (Total from all Supply Points)
Option 1A/B/C: Solar PV	~ 55 MW _p / 45 MW _{AC} (total)
OR	
Option 2A10S: Solar PV and BESS	~ 71 MW _p / 59 MW _{AC} (total) ~ 7.5 MW / 15 MWh (total)

**The minimum individual IPP project sizes making up the maximum contracted capacity for the Project will be determined during the procurement phase*

An important consideration would be how the Municipality's other initiatives, specifically the B/SM 60/24 20 MW Tender impacts the maximum contracted capacity for the Project as

specified in **Table 7-1**. This is considered in Section 7.7.4 - in summary if the B/SM 60/24 20MW Tender results in a contract with the Municipality then the maximum contracted capacity for this Project will be reduced accordingly.

7.3 REGULATORY AND APPROVAL PROCESS

7.3.1 REGULATORY APPROVAL PROCESS OVERVIEW

Section 5 of this feasibility study, read with **Annexure B**, describes key aspects of the legal and regulatory framework applicable to the Project. In proceeding to the procurement phase of the Project, consideration must be given to the obligations and constraints imposed in terms of the Constitution as well as existing national, provincial and local legislation applicable to the Project. In all matters relating to the design and implementation of the procurement phase of the Project, the constitutional procurement principles which underpin the Project must be adhered to. Relevant areas of regulation include municipal powers and governance, public procurement, electricity and environmental law. Adherence to the Municipality's own SCM and preferential procurement policies is a legal requirement, according to case law. Therefore, any deviations thereof which are required for optimal design and conduct of the procurement phase will need to be approved by appropriate governance authorities.

In this procurement plan, we have identified both the third-party approval requirements which must be fulfilled during the procurement phase, and where possible internal municipal governance process and approval requirements, and the timing and sequencing thereof, and key risk areas. Of particular importance is the requirement of Municipal Council approval for the long-term financial commitments envisaged in the PPA, in terms of section 33 of the MFMA.

All agreements that need to be concluded in order to implement the Project and the parties thereto, which must be identified before the procurement documentation is finalised and issued to market, are identified and provided for in the procurement plan, which makes provision for the finalisation of those agreements at the appropriate times, as well as execution of the agreements and fulfilment of conditions precedent where applicable.

An indicative list of required approvals and authorisations that may have to be obtained by bidders in order to be eligible to bid, is included in the legal assessment read with **Annexure B** and should be taken into account in the timing of bid submission and the evaluation criteria. These approvals and authorisations relate largely to the land and environmental aspects of the facilities that will be established pursuant to the Project.

7.3.2 MUNICIPAL GOVERNANCE PROCESS

The Municipal governance processes, especially regarding decision-making, are key to understanding the proper sequencing of events and the timing implications of the procurement phase. Some of these governance processes are determined with reference to applicable statutes such as the MFMA, and others must be determined with reference to internal procedures, delegations and structures including the Municipality's SCM Policy. All of these will be considered in the development of the procurement documents, evaluation of bids up to appointment of preferred bidder(s).

7.3.3 SUMMARY OF THE REQUIRED APPROVALS

Table 7-2 Summary of required approvals

Approval	Required for	Grantor
Submit Feasibility Study to Municipal Council to support the "go / no go" decision	To confirm Municipal Council support for the Project. National Treasury, Provincial Treasury, DMRE and COGTA will be consulted in the course of obtaining Municipal Council approval in terms of section 33 of the MFMA, and although a Feasibility Study is not a regulatory requirement, having completed one will assist in motivating positive responses.	Municipal Council
Bid Specification Committee approval of RFP documents	For submission to Municipal Manager	BSC
Municipal Manager approval of RFP documents (if not delegated to Chair of BSC)	Issue of RFP	MM
Bid Evaluation Committee approval of its recommendations for contract award	Recommendation of preferred bidders, and disqualifications	BEC
Bid Adjudication Committee approval of its recommendations for contract award	Recommendation of preferred bidders [and disqualifications]	BAC
Municipal Manager approval of contract award, subject to section 33 approval	Approval of preferred bidders [and disqualifications]	MM
Municipal council approval in terms of section 33 of the MFMA	Required to enter into the PPA	Municipal Council

7.3.4 PROCUREMENT PROCESS TIMETABLE

It has been assumed that an optimised procurement process will be followed where the RFQ and RFP processes are combined. **Table 7-3** below summarises the key Project milestones including all approvals and work items necessary for obtaining these approvals.

Table 7-3 Project Programme from Feasibility Study Issue Date

No	Activities	Start Date	Duration	End Date
S	Council Meeting Decision to continue to Procurement Phase			31 July 2024
1	Procurement document preparation phase	1 Aug 24	4 months	30 Nov
2	Appointment of Bid Specification Committee members, by the Municipal Manager			
3	Submit Procurement documents for Project Manager, Municipal Project Team, SCM and Department review			30 Nov
4	Review of Procurement documents	3 Dec 24	1 week	6 Dec 24
5	Incorporate comments	9 Dec 24	1 week	13 Dec 24
6	Submit RFP to Bid Specification Committee			13 Dec 24
Festive Break				
7	Bid Specification Committee review	6 Jan 25	1 week	10 Jan 25
8	Bid Specification Committee approval			10 Jan 25
9	Municipal Manager sign off			13 Jan 25
10	Advertisement of RFP release and details where it can be located			17 Jan 25
11	Release RFP (including draft agreements)		Sat after MM Sign Off	17 Jan 25
12	Bidders' preparation period (including Bidder clarification questions and issuing of clarification notes)	17 Jan 25	4 months	26 May 25
13	Bidders conference		1m after issuing RFP	17 Feb 25
14	Last date for bid registration			30 Apr 25
15	Appointment of Bid Evaluation Committee, by the Municipal Manager			30 Apr 25
16	Bid Submission Date			26 May 25
17	Bid evaluation	26 May 25	1 month	25 Jun 25
18	Meeting with BEC to discuss bid evaluation outcome recommendations and potential clarifications			25 Jun 25
19	Issue bidder clarification requests, if applicable	26 Jun 25	4 days	1 Jul 25
20	Time for bidders to respond to clarification requests, if applicable	2 Jul 25	1 week	8 Jul 25
21	Receive bidder clarification responses, if applicable			8 Jul 25

No	Activities	Start Date	Duration	End Date
22	Preparation of bid evaluation, BAC and Value for Money Reports for submission to Bid Evaluation Committee	9 Jul 25	2 weeks	22 Jul 25
23	Submit BEC Report			22 Jul 25
24	Bid Evaluation Committee Meeting and approval of recommendations			28 Jul 25
25	Submit BEC Report and recommendations to BAC			28 Jul 25
26	BAC meeting – provisional approval of Preferred Bidder recommendations subject to Municipal Manager approval and Municipal Council approval in terms of section 33 of the MFMA			6 Aug 25
27	Municipal Manager approval of Preferred Bidder recommendations pursuant to BAC recommendations (because the procurement value is more than R10 million) Communicate provisional Preferred Bidder status to Preferred Bidders			7 Aug 25
28	Communicate to Bidders – issue Preferred Bidder appointment letters (subject to below)			7 Aug 25
29	Commencement of MFMA section 33 approval process			7 Aug 25
30	Commence cost of supply study (if applicable)			
31	Prepare MFMA section 33 report	8 Aug 25		15 Aug 25
32	Issue Reports to DMRE, COGTA, National Treasury and Provincial Treasury to solicit their view	15 Aug 25	1 month	15 Sep 25
33	Section 33 Process Structure Draft Finalised			15 Sep 25
34	Submit MFMA section 33 report for Public comment (at least 60 days prior to council meeting)			15 Sep 25
35	Consideration of comments received from public, DMRE, COGTA, National Treasury and Provincial Treasury and preparation of a Report addressing those comments and, if necessary, a revised section 33 report for submission to Council			
36	Council Meeting to make decision on MFMA section 33 approvals			15 Nov 25 (tbc)
37	Communicate outcome of Council decision on section 33 approval to provisional Preferred Bidders			15 Nov 25
38	TA to review any change requests received from Bidders and prepare change request reports	7 Aug 25		15 Nov 25
39	Change request reports to be submitted to Municipality for approval	7 Aug 25		15 Nov 25
40	Send out preferred bidder communication note on commercial close procedures			20 Nov 25

No	Activities	Start Date	Duration	End Date
41	Prepare PPA and any other legal agreements incorporating schedules	7 Aug 25		20 Nov 25
42	Pre-Commercial close dummy run			21 Nov 25
43	Commercial Close (including signature of all project agreements)			30 Nov 25
44	Process of fulfilment of conditions precedent, if applicable			30 Nov 25
45	Confirmation of financial close, if applicable			30 Nov 25
46	PPA management and monitoring review published			15 Dec 25
47	Capacity building workshop			Jan 26
48	Implementation plan to Commercial operations published			Jan 26
49	Contract Management Plan finalised			Jan 26
50	Transaction Advisory Final Report Published			Jan 26
51	Case Study published			Jan 26
52	Commercial Operations Date			Dec 27
53	PPA Operational period			20 years from COD

A Gantt chart of the Project Programme is attached as **Annexure E**.

7.4 STAKEHOLDER MANAGEMENT DURING THE PROCUREMENT PHASE

Stakeholder management is critical during the procurement phase to gain support during which the Municipality will seek support and approval for the Project as required. A detailed Stakeholder Management Plan is attached as **Annexure A**. However, the section below outlines key stakeholders during the procurement phase. The identified stakeholders may be expanded as and when the need arise during the procurement phase.

7.4.1 THE MINISTER AND DMRE

The Minister is the executive authority responsible for, amongst others, the development of the energy policy to ensure security of supply of energy.

The DMRE will be formally consulted as part of the MFMA section 33 approval process, at the appropriate time.

7.4.2 NATIONAL TREASURY

National Treasury is responsible for the implementation of the fiscal policy of the Government, which is governed by the PFMA, and for ensuring sound fiscal discipline by all spheres of the Government.

National Treasury is a key stakeholder and will be consulted to solicit their views as part of the MFMA section 33 approval process, at the appropriate time.

7.4.3 NERSA

NERSA is the custodian and enforcer of the regulatory framework provided for in the ERA. The statutory powers conferred upon NERSA in terms of the ERA include the power to consider applications for any licences required to be issued under the ERA. NERSA is also responsible for the registration process envisaged in Schedule 2 of the ERA (for persons exempt from having to obtain a licence but who nevertheless must be registered with NERSA).

NERSA approves tariffs for municipalities on an annual basis. The Electricity Pricing Policy (Policy position 23) requires that an electricity distributor should undertake a Cost of Supply study in instances where major tariff restructuring is proposed. This Cost of Supply study should be submitted to NERSA together with a tariff application.

This is a key consideration where the procurement of power from IPPs will result in a tariff restructuring.

7.4.4 PROVINCIAL TREASURY

Provincial Treasury will be consulted for purposes of the MFMA section 33 approval process, and as appropriate in respect of the implementation of the Project.

7.4.5 COGTA

COGTA's mandate is to develop national policies and legislation regarding local government and to monitor, among other things, the implementation of the MFMA, the Municipal Systems Act and Municipal Structures Act.

The Municipality will have to solicit the view of COGTA for purposes of the MFMA section 33 approval process, at the appropriate time.

7.4.6 ESKOM

The Municipality will still be primarily dependent on Eskom for the bulk supply of its electricity. The Project interface with Eskom needs to be carefully considered.

Eskom grid planning and Eskom transmission will be consulted throughout the procurement phase, to assess the impact of one or more new power plants on the grid.

In the event that generation facilities which are proposed for the Project connect to the Eskom transmission or distribution grid, cost estimate letters would need to be obtained by the affected bidders, from Eskom. The feasibility of their proposed projects will be contingent on grid capacity availability on the IPS, as determined by Eskom from time to time.

7.4.7 DEVELOPERS / LENDERS

Development Finance Institutions will play an important role in providing funding to potential IPPs and can potentially provide credit enhancement instruments that could aid in the bankability of the Project.

Commercial lenders would need to be consulted on the structure of the procurement programme, risk allocation and its impact on project bankability.

Project developers may be consulted through an RFI and or EOI process to inform the procurement process. Formal communication channels should also be established once the procurement programme has been launched.

7.5 PROCUREMENT PRINCIPLES AND PROJECT STRUCTURE

7.5.1 GUIDING PRINCIPLES

The guiding principle is to develop an IPP procurement approach to be conducted in accordance with law and policy, and to the highest standards of efficiency, quality, and integrity. The procurement process must be transparent and fair.

Procurement principles in the public sector are entrenched in the Constitution and the application thereof has been tested regularly, with a substantial body of relevant jurisprudence supporting the procurement principles. The typical risk allocation in PPAs has also become well established in South Africa, following the success of the REIPPPP, and more recently the proliferation of Commercial and Industrial (“C&I”) customers procuring energy for own use.

These established risk allocation principles will be assessed against the specific requirements of the Project and will be reflected in the bid invitation documentation (RFP), and in the PPA, to ensure the most optimal process and contractual regime is developed taking into account lessons learnt in the public and private sector processes and the specific Municipal environment.

This section sets out guiding principles that will be further developed during the procurement phase and is subject to change as the Project develops.

7.5.2 EXPRESSION OF INTEREST, REQUEST FOR QUALIFICATION AND REQUEST FOR PROPOSAL

A typical multiple-stage procurement process could include a Request for Information (“RFI”), an expression of interest (“EOI”) followed by a Request for Qualification (“RFQ”) and then a Request for Proposal (“RFP”).

An RFI or EOI is typically utilised where a need has been identified to gather some information that may influence the feasibility or design of the project, or aspects of the procurement process or documents. An RFI or EOI can also be beneficial to notify and communicate to the market information regarding an imminent procurement process and may start indicating some salient features of the potential procurement process. Market feedback will assist in understanding the potential projects under development and may solicit interest that would not have been there as the Project would not have been known if not widely communicated. An EOI or RFI also serves to alert the market as to the commercial opportunity and likely Project requirements, so that they can start planning potential bid proposals.

An EOI or RFI is usually not a formal component in the procurement process, and therefore it would not be mandatory to respond to the EOI or RFI, in order to secure eligibility to participate in the formal procurement process.

The use of an RFQ in addition to an RFP means that a two-stage bidding process, as contemplated in paragraph 25 of the Municipality’s SCM Policy, is to be conducted. In terms of paragraph 25, a two-stage bidding process is permitted for large complex projects, projects where it may be undesirable to prepare complete detailed technical specifications, and long-term projects with a duration exceeding three years. According to paragraph 25, in the first stage technical proposals on conceptual design or performance specifications should be invited, subject to technical as well as commercial clarifications and adjustments. In the second stage, final technical proposals and priced bids should be invited.

In issuing an RFQ in the PPP context, the intent is to shortlist interested parties which respond to the RFQ and which meet established qualification criteria. By shortlisting bidders, the RFQ stage should enable the Municipality to take comfort that suitably qualified and experienced bidders will respond to the RFP and where a large number of responses are expected it could assist in streamlining the bid evaluation process and preferred bidder appointment.

In the RFP stage, the municipality either shares the RFP with pre-qualified bidders (if an RFQ phase preceded it), or it issues an RFP that is open to all parties as specified in the RFP. The RFP will include a comprehensive description of the project and the tender process (from the issue of the RFP through to Financial Close), terms and conditions for bidding and the clear legal, technical and financial functionality criteria against which bid responses will be evaluated for compliance. Bidders that pass the functional evaluation will be competitively

evaluated based on a bidder's price and specific goals pertaining to economic development, as contemplated in the PPPFA Preferential Procurement Regulations, 2022.

Under the REIPPP programme, a one-stage bidding process was conducted, meaning effectively that the RFQ and RFP were combined into a single-stage evaluation. Bidders were required to "pass" all of the legal, financial, technical and economic development qualification thresholds, before being considered for evaluation of their price and economic development commitments.

Recommended approach

It is recommended that the Municipality follow the following process:

- Issues an EOI during the feasibility or procurement preparatory phase. The purpose of the EOI would be to solicit information and interest in respect of the Project. The key objective of this EOI would be to gather information in respect of the location of potential projects and availability of land, as well as to communicate to potential interested parties well in advance of the RFP issue date, to allow sufficient time for preparatory activities. The Municipality would solicit information from interested parties on a non-compulsory basis.
- It is further recommended that for purposes of the formal procurement process, the Municipality follow a single stage procurement process, whereby complete bids (including technical proposals, financial and economic development proposals) will be solicited rather than having a two-stage process where a Request for Qualification Process is firstly followed and where the Request for Proposal is only issued to parties who qualified under the RFQ process. Once submitted, those proposals will firstly be evaluated for compliance with the functional criteria. Bidders that pass the functional evaluation will be competitively evaluated based on a bidder's price and specific goals pertaining to economic development.

Reasons for recommending a single-stage process for the Project include that it is familiar to the market due to REIPPPP; and that a single-stage procurement process can be conducted over a shorter period than a two-stage procurement process. Because of that, it is also generally more cost-effective and less onerous for the Municipality than a two-stage procurement process.

In addition, in the case of the Project – and because there is an extensive amount of preparatory work that prospective bidders have to do to meet envisaged functionality requirements, including securing land rights and key environmental consents – it may be difficult to set suitable qualification criteria for an RFQ that allow the Municipality to filter out under-qualified proposals, because the bidders' project proposals may not be advanced enough at RFQ stage to ascertain readiness and feasibility.

7.5.3 BIDDER REGISTRATION PROCESS

It is also recommended that the RFP provides for a bid registration process after issue of the RFP, which is compulsory for all prospective bidders, and that for purposes of registration potential bidders be required to register their interest in participating in the RFP.

In the bid registration process, potential bidders should be required to provide information relating to the identity of all participants (members, shareholders, lenders, contractors, suppliers and advisors); information on where the potential bidder intends to connect its project; contracted capacity, etc.

The compulsory bid registration has several advantages, that include:

- It informs the Municipality ahead of bid submission of the number of interested parties, which will facilitate resource planning
- It facilitates checking any conflicts that may exist with any of the members of the Bid Evaluation Team, BEC and BAC
- It provides a formal line of communication between the potential bidder and the Municipality, to communicate any key information in respect of the RFP and any changes that may be required due to bidder clarification questions raised
- It informs the Municipality of potential points of connection to the grid, to allow for preparatory activities to be undertaken in assessing the impact of the projects on the grid.

Potential bidders typically have up to a month before the bid submission date, to register their interest to participate. It is recommended that potential bidders be required to pay a non-refundable bidder registration fee. This can be a nominal amount ranging from R10 000 to R25 000. This payment is aimed to ensure that only 'real' parties register for participation in the RFP.

On bid registration (i.e. once a bidder has complied with the registration process), each registered potential bidder should be given a unique project number, which will assist the Municipality when bids are received to cross-check that bidders have complied with the registration requirements and will facilitate communication between the Municipality and the bidders during and after the procurement process. Having unique project numbers will also assist the Municipality with orderly record-keeping in respect of the Project.

Details will have to be included in the RFP as to whether a bid registration fee must be paid by registrants, and if so what the amount is, what method of payment is required, by when that payment must be made, and whether it is refundable under any circumstances.

7.5.4 BIDDERS CONFERENCE

It is recommended that a Bidders Conference be hosted by the Municipality. The Municipality will be supported by the TA Team at the Bidders Conference.

It is recommended that attendance at the Bidders Conference be voluntary – all presentations made will be available together with the RFP.

The benefit of a Bidders Conference is that it provides the Municipality with an opportunity to communicate and promote the Project. Presentations made by the Municipality at the Bidders Conference should focus on the key requirements of the RFP and provide prospective bidders with an opportunity to engage on those requirements.

7.5.5 CONFLICTS OF INTEREST

Bidders will be required to disclose any potential conflicts of interest, in their bid responses. In addition, any Municipal official and members of the TA Team, and any other person who may be involved in or have any input on the evaluation of bids and associated decisions, should be required to disclose any potential conflicts of interest, at the appropriate time.

Matters pertaining to disclosure of conflicts of interest of Municipal officials, amongst other ethical standards, are regulated at paragraph 46 of the SCM Policy which establishes a code of ethical standards.

For members of the TA Team and other non-Municipal participants in the procurement process, disclosure of any potential conflicts should be made at one or more appropriate times, including after bidder registration when the identity of potential bidders and their consortium members is known.

7.5.6 BIDDER GUARANTEES

7.5.6.1 Bid Guarantee

The imposition of a Bid Guarantee requirement in the RFP will tend to disincentivize ‘chance-takers’, provided that the circumstances in which the Municipality can call up the Bid Guarantee are sufficiently widely framed so that the submission of incomplete or materially non-compliant bids can trigger an entitlement on the part of the Municipality to call up a Bid Guarantee. Permitting the Municipality to call up a Bid Guarantee if a bidder withdraws its bid proposal prior to final contract award also tends to ensure that only serious bidders participate; and also that they are unlikely to market their projects elsewhere while the procurement is in process.

On the other hand, there is a cost involved in securing a Bid Guarantee, which bidders will have to cover for in their bid price. Also, in reality it is a difficult decision for an organ of state to make, to call up a Bid Guarantee, therefore the chances of the Municipality enforcing its rights under the Bid Guarantee are fairly remote.

Details will have to be included in the RFP as to whether a Bid Guarantee will be required and the process and requirements in this regard.

7.5.6.2 Preferred Bidder Guarantee

It is typical to obligate a preferred bidder, on acceptance of appointment as preferred bidder, to submit a Preferred Bidder Guarantee which would replace its Bid Guarantee (assuming a Bid Guarantee is also required). The Preferred Bidder Guarantee serves to guarantee the preferred bidder's performance of its undertakings as preferred bidder, including in relation to the committed timelines to commercial close.

The enforceability of the preferred bidder's obligations needs to be clearly stipulated in the preferred bidder appointment letter, as well as the consequences of non-compliance with those obligations including the precise circumstances in which the Municipality can call up the preferred bidder guarantee.

7.5.7 STRUCTURE OF RFP

7.5.7.1 Overview

The procurement documents should set out the rules of participation, providing bidders with information about the requirements to allow potential bidders to prepare comprehensive and competitive bid responses that meet the Output Specifications. It should also set out the requirements of how bidders must structure their bids responses in order to comply with the requirements as set by the Municipality.

Paragraph 21 of the Municipality's SCM Policy sets out certain requirements for bid documentation, including:

- that such documentation must include the preference points system to be applied;
- the specific goals;
- evaluation and adjudication criteria [which in the case of an IPP procurement programme usually cover bidder structure, technical criteria, financial criteria, legal criteria, environmental criteria, land use criteria, and economic development criteria];
- provisions for declaration of conflicts of interest;
- submission of annual financial statements of bidders;
- certification of no outstanding municipal service commitments which are overdue by 30 days or more;
- particulars of contracts awarded to the bidder by organs of state in the last 5 years;

- a statement of imported content and contract value that will be exported;
- dispute resolution provisions;
- bid validity period;
- provisions regulating termination of contract in the case of defective performance; and
- provisions regarding objections and complaints about the procurement process.

The procurement documents for an IPP procurement programme will, in addition to the items listed above, typically include:

- bid submission date and delivery requirements;
- format for submission of bids;
- description of Project scope;
- required contents of bid responses;
- prohibited participants, if applicable;
- bidder registration requirements;
- any fees that are payable or guarantees which must be submitted by registrants, bidders or preferred bidders;
- circumstances in which bidders can be disqualified;
- information about grid connection of bidder projects;
- bid evaluation and award methodology;
- reservation of Municipality's rights;
- Municipality contact details and information about clarification questions that bidders can submit;
- anticipated Project timetable and process to financial close;
- pricing proposal requirements;
- draft Project agreements including the draft PPA, connection agreement/s, direct agreement/s and independent engineer agreement; and
- other returnable documents and schedules required to be submitted by bidders in support of their bid proposals.

For ease of reference, the RFP should be structured to include the procedural and other matters listed above, in a manner which is easily comprehensible and flows logically, for example:

- An introductory section setting the context and providing bidders with general information about the procurement process and stipulating the high-level output specifications.
- A section setting out clear legal, environmental, technical and financial functionality criteria against which bid responses will be evaluated for compliance.
- A section setting out the bid evaluation process, including how bids that pass the functional evaluation thresholds or requirements will be competitively evaluated based on a bidder's price and specific goals pertaining to economic development, as contemplated

in the Preferential Procurement Policy Framework Act read together with the Preferential Procurement Regulations, 2022.

We recommend that bidders be required to submit a separate bid response for each project, however that a bidder should be entitled to submit more than one bid response if it has interests in a number of different and discrete projects.

7.5.8 PRICE

The procurement documents and PPA must include a detailed tariff methodology. The RFP must also clearly stipulate the risk allocation to allow potential bidders to appropriately price their bid. This is an essential part of any procurement process to ensure an unambiguous and transparent process.

The tariff structure is also critical to underpin the bankability of the procurement process. Consideration will be given to take or pay, capacity payments, energy payments and deemed energy payments as appropriate.

Bidder will be required to bid a price (with tariff structure dependent on the technical solution option recommended). The price is not negotiable however the Municipality retains the rights to enter into value for money negotiations with preferred bidders.

7.5.9 CONTRACTING ARRANGEMENTS FOR THE STMIPPPP

A key part of the success of the REIPPPP as well as the recent C&I IPP PPA market is to issue standardised agreements which are part of the procurement documents. It has also become standard practice to prohibit mark-ups to the agreements. The non-negotiable condition brings several benefits that include:

- an optimised commercial close period which is not delayed due to protracted negotiation;
- it promotes the transparency and integrity of the procurement process where the Price bid is transparent and cannot be amended post bid submission or appointment of preferred bidder as result of negotiation of key terms i.e. all bidders are treated equally based on transparent principles captured in the agreements where the risk of each party is clearly known before bidding;
- the need to maintain consistency in the risk positions across all preferred bidders once the agreements are signed.

Section 5.3.15 of this feasibility study report provides information on the likely contractual arrangements required for the Project.

The preliminary risk allocation principles are attached as **Annexure G**.

7.6 THE PROJECT TEAM WITH ASSIGNED FUNCTIONS

The following section outlines the specific teams and roles in respect of the procurement and bid evaluation process.

7.6.1 BID SPECIFICATION COMMITTEE

The BSC composition, structure and functions are detailed in the Municipality's SCM Policy, and summarised below.

- The BSC comprises of one or more officials from the Municipality, preferably the manager responsible for the relevant function. The committee may include external or internal specialist advisors when appropriate. To maintain integrity and impartiality, individuals or entities associated with the BSC are prohibited from bidding for resulting contracts.
- Its main function is to prepare specifications for each procurement of goods or services. These specifications are drafted in an unbiased manner, allowing all potential suppliers an equal opportunity to participate. Moreover, the BSC considers accepted industry standards, such as those endorsed by Standards South Africa or the International Standards Organisation, to ensure the quality and reliability of procured goods or services. Emphasising performance requirements over descriptive characteristics, the BSC promotes fair competition based on suppliers' ability to meet functional requirements rather than surface qualities.
- Specifications must not create trade barriers or unfairly advantage certain suppliers. Specific references to trademarks, patents, or origins are avoided unless necessary, in which case they must be accompanied by the term "equivalent".
- The BSC also ensures compliance with the preference points system outlined in the applicable PPPFA Regulations. Before bid invitations are published, all specifications undergo scrutiny and approval by the Accounting Officer.

7.6.2 THE BID EVALUATION

7.6.2.1 *Evaluation of bid responses*

The evaluation of bid responses will be conducted in two distinct parts:

Phase 1: Evaluation of bid responses against the functional criteria. The evaluation is undertaken in order to confirm whether bidders have met the criteria in order to confirm that the bid responses are compliant bids.

Phase 2: Compliant bids are evaluated comparatively and ranked. The purpose of this phase is to determine the scoring and relative ranking of compliant bids against each other with consideration to their price and economic development commitments.

Whilst awaiting bid responses the TA team will prepare evaluation templates based on the functional criteria set out in the RFP. The evaluation templates form the basis of the bid evaluation of the functional criteria. Each discipline being legal, technical and financial will be responsible for evaluating their specific area of the RFP.

In addition to preparing the bid evaluation templates, the TA Team in consultation with SCM will prepare an evaluation manual and bid management guide. The evaluation manual is intended to guide the Municipality and TA Team in evaluating bid responses and the bid management guide will outline the process of communication with bidders, delivery and opening of bid responses and distribution of the bid responses to the evaluation team and protocols to ensure the integrity of the bid responses.

The Bid Evaluation Team evaluates the bid responses according to the pre-determined functional / evaluation criteria set out in the RFP and utilising the evaluation templates that should be prepared before bids are received and in line with the evaluation manual.

The Bid Evaluation Committee

The BEC composition, structure and functions are detailed in the Municipality's SCM Policy, and summarised below.

- The BEC consists of officials from various departments within the Municipality that require the goods or services being procured. Additionally, at least one member of the committee must be a practitioner in supply chain management from within the Municipality itself.
- The initial evaluation of all valid bids received is the responsibility of the official from the relevant user department. This preliminary assessment culminates in the submission of a comprehensive bid evaluation report to the BEC for their consideration.
- The BEC's primary responsibility is to evaluate bids submitted in response to procurement opportunities, conducting assessments against specified criteria such as compliance, contractual capability, financial stability, and adherence to municipal regulations.
- Moreover, the BEC ensures transparent and equitable bid evaluation by considering factors like pricing, qualifications, and preferential procurement requirements. Additionally, it verifies bidder eligibility, confirming registration on the municipality's supplier database and compliance with industry regulations.
- Furthermore, the BEC conducts checks to ensure the recommended bidder's financial stability and compliance with municipal obligations.

Once the Evaluation Team has completed the bid evaluation process, they will prepare and submit a report summarising the outcome of the evaluation which includes a recommendation as to the preferred bidder(s) to the BEC for consideration by the BAC.

Bid Adjudication Committee

The BAC composition, structure and functions are detailed in the Municipality's SCM Policy, and summarised below.

- The BAC consists of a minimum of four senior managers. It must include either the Chief Financial Officer or a designated representative from the budget and treasury office. Additionally, the BAC comprises at least one senior supply chain management practitioner who holds an official position within the municipality. Furthermore, if available, the BAC may include a technical expert in the relevant field.
- The BAC is primarily responsible for reviewing and deliberating on the report and recommendations furnished by the BEC. Its role involves making final decisions regarding the awarding of bids or recommending such decisions to the Accounting Officer, contingent upon its delegated authority.
- In instances where the recommended bid differs from the outcome proposed by the BEC, the BAC must ensure the preferred bidder's compliance with municipal obligations before notifying the Accounting Officer.
- Additionally, the Accounting Officer possesses the prerogative to either endorse or reject the BAC's decisions, with the option to refer back for reconsideration if necessary.

The BAC provisionally approves the preferred bidder recommendation subject to Municipal Manager approval and Municipal Council approval in terms of section 33 of the MFMA.

The Municipality, with the support of the TA Team, facilitates the achievement of commercial close and financial close through the conclusion of the PPA and the Direct Agreement by the relevant parties. The Municipality would then have the obligation to monitor compliance with the contractual obligations.

7.7 ITEMS TO RESOLVE AND PREPARATORY ACTIVITIES DURING THE PROCUREMENT PHASE

This section of the report considers any potential challenges to the Project and a discussion on how these will be addressed by the Project Team and TA.

These key issues/ challenges relate to the following:

7.7.1 FORMAL ESKOM CONFIRMATION ON GRID CAPACITY AND POS

Connecting a large solar PV plant anywhere within the Municipality's distribution networks will have a negative impact on the Eskom Western Cape supply area evacuation capacity constraint. It is unclear if a large solar PV plant connected behind the meter would have to apply to the Eskom grid access unit for approval. The TA Team has not been able to obtain a conclusive response from Eskom on this aspect. This requires resolution and it is recommended that the Municipality and or WCG pursue this topic with Eskom to obtain formal written confirmation.

Formal confirmation is required from Eskom on how they view aggregated supply between the Municipal PoS - i.e. if Eskom views the Stellenbosch Municipality load (from all supply points) in aggregate e.g. a reduction of load at the Stellenbosch meter which is equal to the demand at Cloetesville, Pniel and Franschhoek will be viewed the same as 'load shedding' of those supply points. Our understanding through discussion with Eskom is that this option may only be possible for Municipal loads connected through the same Eskom substation. Further confirmation is required from Eskom. This will influence the minimum and maximum size of projects that will be able to participate in the STMIPPPP.

7.7.2 LAND AVAILABILITY

Land availability – A potential risk has been identified in respect of land availability and whether there will be sufficient land available for the Project within the Municipal boundary that will be able to connect to the Municipal distribution network. It is recommended that the Municipality issue an EOI (which has already been drafted by the TA Team) to gather information from the market in respect of potential project sizes, location and readiness to participate in the intended procurement process. This will inform key decisions as to the intended procurement programme design and may influence the decision whether to consider including wheeling from other points of connection.

7.7.3 BIDDER READINESS AND SUFFICIENT TIME TO OBTAIN NECESSARY APPROVALS

IPP project development could take time to develop, obtain necessary environmental and other approvals. There is a legal fairness consideration, in that the Municipality must give potential bidders sufficient time to prepare their bids. It is recommended that the EOI referred to above, also provide some high-level information on the planned procurement process and thereby informing interested parties of the indicative timeframe of the procurement process and will allow them to commence with preparatory activities.

7.7.4 IMPACT OF THE B/SM 60/24 20 MW TENDER ON THE PROJECT

The Municipality issued the B/SM 60/24 20 MW Tender with the objective to procure 20 MW of renewable energy from an IPP. Three bid responses were received, and it is understood by the TA Team that the bids have been evaluated and award of a preferred bidder is imminent. The impact of the B/SM 60/24 20 MW Tender could not be assessed as no information could be shared at the time of undertaking this feasibility study. The impact will have to be considered before releasing the STMIPPPP RFP. The estimated time for release of the STMIPPPP RFP is January 2025. At this time the success of the 20 MW should be known as the preferred bidder's project should be close to achieving commercial and financial close. The size of the maximum contracted capacity that can be procured as detailed in **Table 7-1** for this Project will be confirmed or adjusted at that time.

7.7.5 GRID CONNECTIONS

The Municipality will need to consider how it will manage approaches from potential bidders in respect of connecting their projects to the Municipal grid. It is unclear how many developers might have conducted advanced feasibility studies on other points of the network, and the extent of engagement with local landowners in terms of permissions for wayleaves. This process, which we assume will be similar to the Cost Estimate Letter process that is well established by Eskom will need to be considered during the procurement phase. This is described in more detail in **section 4.5.3** of this report.

7.7.6 CONTROL MEASURES

The Municipality will need to investigate and implement the necessary control measures to ensure it is able to dispatch any generation plant based on any local or Eskom grid requirements. This is described in more detail in **section 4.5.4** of this report.

7.8 QUALITY ASSURANCE PROCESS FOR PROCUREMENT DOCUMENTATION

Well-drafted procurement documentation with due consideration to Project risks, is essential to create credibility with potential bidders and to ensure that bidders appointed as preferred bidder reach financial close and commercial operations within planned timelines. The more and better-quality information is given by the Municipality in the RFP, and the clearer the Municipality is about what it expects to receive in bidders' proposals, the higher the quality of proposals should be.

Factors that influence the quality of procurement documents are:

Robust feasibility study that underpins the procurement framework – a feasibility study provides the basis upon which the procurement is undertaken and should clearly outline the output specifications and regulatory roadmap to ensure all factors are considered before embarking on procurement.

A team with adequate skills and resources and knowledge of best practice - The preparation of the procurement documents will be undertaken by the TA, who has the technical expertise and knowledge required to undertake this task. The TA team comprises specialists in Legal, Financial, Technical, Economic Development, Stakeholder Management and Project Management expertise. Each discipline will have clearly defined roles and responsibilities to ensure robust and transparent evaluation criteria. The TA team also have extensive experience in developing the required legal agreements that need to be included in the procurement documents. A key focus will be on risk allocation principles that will allow bidders to appropriately price for the risk that has been transferred to them and at the same time provide the necessary conditions that ensures bankability of the PPA.

Quality review process - The preparation of bid documents will be subject to a quality assurance process that encompasses every member of the team. There will be interaction (in the form of workshops etc) between key officials of the Municipality, the Department, Project Manager, and the TA Team during the compilation of the draft documentation.

7.9 THE MEANS OF ESTABLISHING AND MAINTAINING AN APPROPRIATE AUDIT TRAIL FOR THE PROCUREMENT

The following factors need to be considered to ensure the necessary governance and audit trail is put in place:

Appropriate security and confidentiality systems, including confidentiality agreements, anti-corruption mechanisms, and conflict of interest forms to be signed by all project team members.

Document and data control – the original bid submission master copy (hard copy and electronic submission) should be retained by the Municipality in a secure environment. If any information needs to be verified against the master copy, there should be access control recording who had access to the hard copy and information can be verified and copies made however the master copy should not leave the secure environment.

8. FEASIBILITY STUDY SIGN-OFF

Feasibility Phase Deliverables

1. Draft feasibility report structure determined
2. Needs analysis concluded
3. Final stakeholder list & engagement approach & plan finalised
4. Final feasibility report structure determined
5. Options analysis conducted
6. Preferred solution option identified and analysed from a technical, financial and legal perspective
7. Draft procurement plan and guiding principles agreed
8. Draft feasibility report published and finalised
9. Final feasibility report published and finalised

The signatories to this document hereby confirm that:

- the Feasibility Study Report clearly details the Needs analysis of the Project.
- the Feasibility Study Report clearly details the Options analysis of the Project and recommended option is clearly identified.
- the stakeholders have been identified and a stakeholder engagement approach has been appropriately developed.
- the preferred solution option has been identified and analysed from a technical, financial and legal perspective.
- the draft procurement plan has been developed and guiding principles agreed.

Client:	Signature:	
	Full Name:	
	Designation:	
	Date:	
Project Sponsor:	Signature:	
	Full Name:	
	Designation:	
	Date:	
Project Manager:	Signature:	
	Full Name:	
	Designation:	
	Date:	



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23 FEASIBILITY STUDY

Annexure A – Stakeholder Management Plan V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

Version	Description	Date Issued
V0.1	First Draft	4 April 2024
V0.2	Second draft incorporating comments received	3 May 2024
V0.3	Final draft incorporating additional comments received	31 May 2024
V.F	Final Draft	27 June 2024

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GLOSSARY OF TERMS

ATNS	Air Traffic Navigation Services
CEF Group	Central Energy Fund Group
CIDB	Construction Industry Development Board
COGTA	National Department of Co-Operative Governance and Traditional Affairs
CSIR	The Council for Scientific and Industrial Research
DBSA	Development Bank of Southern Africa
DEADP	Department of Environmental Affairs and Development Planning
DEDAT	Western Cape Government's Department of Economic Development and Tourism
Department	Western Cape Government's Department of Infrastructure
DFFE	Department of Forestry, Fisheries and the Environment
DFIs	Development Funding Institutions
DLG	WCG Department of Local Government
DMRE	National Department of Mineral Resources and Energy
DPWI	National Department of Public works and Infrastructure
ERA	Electricity Regulation Act, No. 4 of 2006
ESKOM	Eskom Holdings SOC Limited
I&AP	Interested and Affected Parties
IDC	Industrial Development Corporation of South Africa Ltd
IDP	Stellenbosch Municipality Integrated Development Plan, 2022-2027
IPP	Independent Power Producer
LED	Local Economic Development
MAYCO	Mayoral Committee
MER	Western Cape Municipal Energy Resilience
MFMA	Local Government: Municipal Finance Management Act, No. 56 of 2003
Minister	Minister of Mineral Resources and Energy
MIPPPP	Municipal Independent Power Producer Procurement Programme
Municipality	Stellenbosch Municipality
NERSA	The National Energy Regulator of South Africa
NewGen Regs	Electricity Regulations on New Generation Capacity, 2011, issued in terms of the ERA
PMT	Project Management Team
PPA	Power Purchase Agreement
PPP	Public Private Partnership

PPP Regulations	Municipal Public-Private Partnership Regulations, 2005, issued in terms of the MFMA
Province	Western Cape Province
PSC	Project Steering Committee
PSP	Western Cape Government's Provincial Strategic Plan, 2019 to 2024
PV	Photovoltaic
RFP	Request for Proposal
SAASTA	South African Agency for Science and Technology Advancement
SAFCOL	South African Photovoltaic Industry Association
SALGA	South African Local Government Association
SAPVIA	South African Photovoltaic Industry Association
SDBIP	Stellenbosch Service Delivery Budget Implementation Plan
SPV	Special Purpose Vehicle
Systems Act	Local Government: Municipal Systems Act, No. 32 of 2000
TA	Transaction Advisor(y)
WCG	Western Cape Provincial Government

1. INTRODUCTION

1.1 OBJECTIVE OF THE STAKEHOLDER MANAGEMENT PLAN

The aim of this document is to provide a stakeholder management strategy and plan to guide the Stellenbosch Municipality ("**Municipality**") in respect of the **Stellenbosch Municipal Independent Power Producer Procurement Programme ("Stellenbosch MIPPPP or Project")**. It is a living document and needs to be regularly updated by the Municipality, in collaboration with the Transaction Advisor ("**TA**").

Stakeholder management is an essential part of the successful development and implementation of a project of this nature. It is recommended that the Municipality makes this document their own and report on progress made, actions and changes in Steering Committee meetings.

It is important for the ongoing sustainability of the Project to actively engage with all identified stakeholders. The Municipality considers its stakeholder engagement to fall under one of its focus areas of relationship management – and therefore it should ensure that considerable effort is put into maintaining current and building future relationships.

It is important to note that this stakeholder management plan exclude any stakeholder management matters as envisaged in any environmental management legislation and regulations.

1.2 PROJECT BACKGROUND AND OVERVIEW

The Project may proceed to the procurement of one or more **IPPs** to supplement the provision of energy to the Municipality. The procurement of IPPs for the Municipality may among others include the following procurement steps:

- Expression of Interest process
- Request for Qualification process
- Request for Proposal process
- Evaluation of IPP submissions
- Adjudication of IPP submissions
- Negotiation with IPPs that progressed through the adjudication process
- Power Purchase Agreement ("**PPA**") finalisation process
- Municipal decision-making processes
- Stakeholder involvement and views and recommendations
- Commercial close process
- Financial close process

As indicated above, this stakeholder management strategy and plan is to cover all the life cycle development stages of the Project and needs to be reviewed, changed, updated and expanded on by the Municipality as the Project progresses through the Project development life cycle.

2. OUTLINE OF THE STAKEHOLDER MANAGEMENT PROCESS

2.1 STAKEHOLDER MANAGEMENT PROCESS DEFINED

The management of stakeholders entails the following process:

- Identifying the people, groups, or organizations that could impact, or be impacted upon by the Project;
- The appraisal of identified stakeholders' expectations and their impact on the Project; and
- The development of appropriate management strategies to effectively engage stakeholders in Project development, decisions and execution.

To effectively manage stakeholders and their expectations, the Municipality must manage relationships with all stakeholders identified by building trust, gathering information, provide information regarding the Project, early identification of challenges, resolving possible conflict, actively listening, and overcoming any resistance to change for the Project.

The Project is governed through a Project governance structure that include the Project Steering Committee ("**PSC**"). The PSC includes officials from the Municipality, the WCG, the Pegasys Project Management Team and the TA.

The engagement with stakeholders should take place throughout the Project lifecycle and be based on the analysis of their needs, interests and potential impact on the Project's success.

2.2 GUIDING PRINCIPLES FOR STAKEHOLDER ENGAGEMENT

This subsection of the stakeholder management strategy and plan provide some insight to the guiding principles of a successful stakeholder engagement.

2.2.1 TIMELY

There is a requirement for stakeholder engagement to be undertaken timeously. This means that stakeholders are given sufficient time frames for their engagement that are well established and communicated in advance of actual engagement opportunities. Moreover, information related to engagement processes should be published timeously.

2.2.2 INCLUSIVE

The pledge to leave no one behind means that engagement mechanisms should be open and inclusive, providing all relevant people and groups with opportunities to engage and participate in the development of the Project. Openness, however, is not sufficient to ensure inclusivity. Extra efforts are often needed to ensure the presence and participation of all relevant people or groups. Providing information in local languages and making use of a range of methods for engagement, including both offline and online options, are also important key aspects to ensure inclusivity.

2.2.3 TRANSPARENCY

Stakeholder engagement should be transparent, with information on Project engagement processes and plans being clear and widely communicated. Moreover, and as indicated above, information related to Project engagement processes should be published timeously. This means information and documentation that inform Project engagement processes are published in advance and where appropriate feedback is to be provided to relevant stakeholders during the follow-up to engagement processes. Efforts in transparency must take cognisance of certain Project confidentiality and sensitivity requirements and the Project Officer must be open about this and the reasons for it.

2.2.4 INFORMED

Effective stakeholder engagement requires that stakeholders are informed about the purpose of engagement, how their inputs will be used and the overall expected outcomes. Documentation should be provided ahead of all interactions with sufficient time, clear deadlines and appropriate tools to provide their feedback. There should also be follow-up correspondence and documentation on how inputs have been considered.

2.2.5 ITERATIVE

Lastly, effective stakeholder engagement should be iterative. Engagement is not a singular process or event but rather a continuous process where multiple opportunities for ongoing engagement exist for different stakeholders. Dialogue should be two-way between those hosting the consultations and those in attendance with mechanisms for engagement institutionalised to provide long-term dialogue for continuous input from and feedback (as appropriate) to relevant stakeholders.

3. STAKEHOLDER ENGAGEMENT PLAN

The Stakeholder Management Plan was developed to effectively engage stakeholders in project decisions and execution already at the Feasibility Study Stage of the Project.

As stated, there are three key stages in the management of the Project stakeholders in, namely:

- Stakeholder identification;
- Stakeholder analysis; and
- Stakeholder engagement and control.

These three (3) stakeholders management stages are detailed in this section of the report.

3.1 STAKEHOLDER IDENTIFICATION

Stakeholders are those who can affect or who may be affected by the Project, that has an interest in the Project's development and performance when implemented. Different stakeholders will have different interests in the Project. Stakeholders are also those defined by the Municipal Systems Act under definition of "Local Community" and Section 21 of this Act.

There are primary and secondary affected stakeholders on the Project. Primary stakeholders may include:

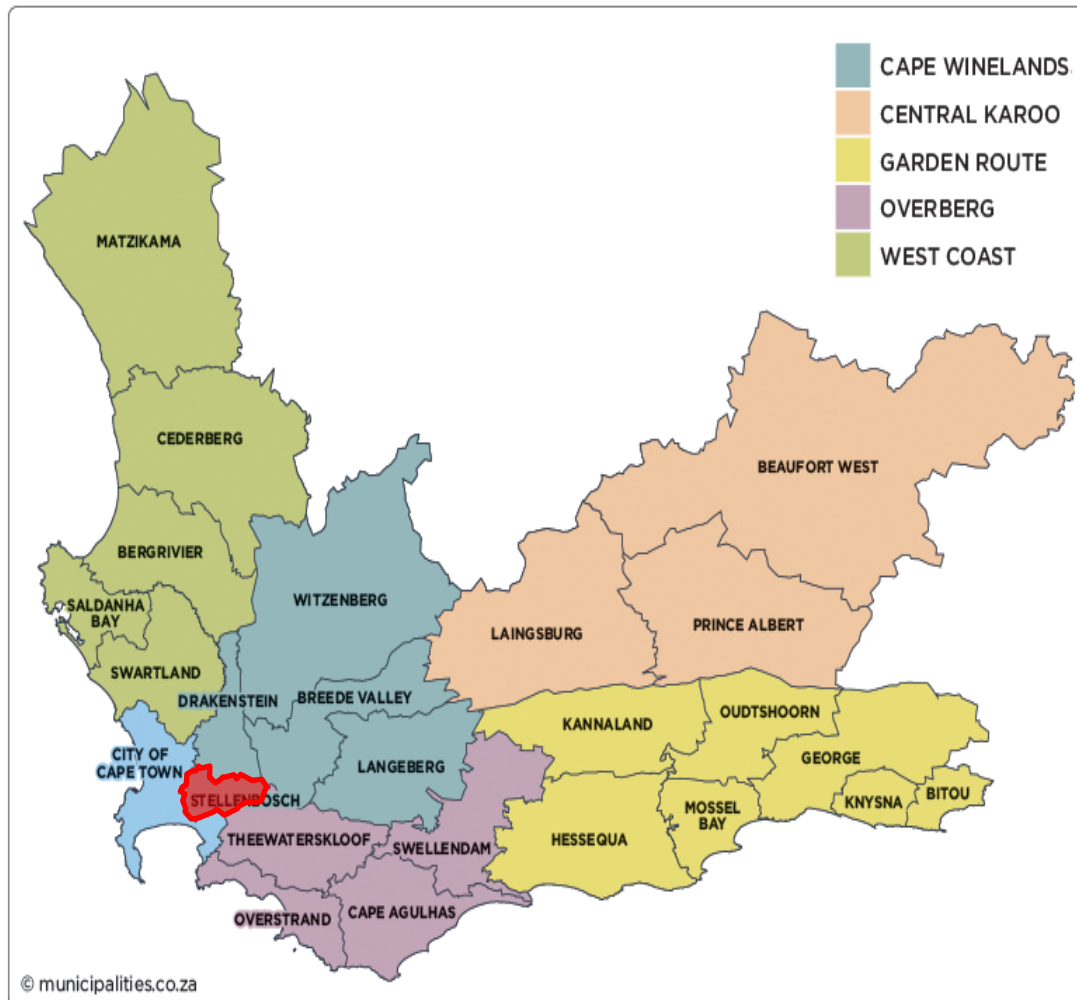
- Project development sponsors, the WCG
- Project implementation agent, the Municipality
- Investors
- Potential service providers
- Financial institutions
- Potential customers
- Potential suppliers
- Organised labour
- Regulating national and provincial government departments
- Government entities
- The TA

The primary stakeholders are critical and without them the Project cannot be successful or implemented.

There are also secondary stakeholders that include the non-regulated national and provincial government, government entities, the community and special interest groups - like trade associations, economic development groups and pressure or special interest groups. These stakeholder groups can benefit from the Project's success or can be harmed by its failures and mistakes.

It is important that the interest of all stakeholders must be considered during the Project lifecycle.

Map:



Common Boundaries with: City of Cape Town, Drakenstein Municipality, Breede Valley Municipality, Theewaterskloof Municipality

The identification of stakeholder considered internal and external stakeholders.

3.1.1 INTERNAL STAKEHOLDERS

The **Internal Stakeholders** to the Municipality include:

- The Council
 - Mayoral Committee (MAYCO)
 - Deputy Mayor and MMC (Member of Mayoral Committee) for Financial Services

- MMC for Infrastructure Services
- MMC for Corporate Services
- MMC for Planning, Local Economic Development (“LED”) and Tourism
- Speaker (Not officially part of MAYCO)
- Municipal Manager
- Management Team
- Director Infrastructure Services
 - Senior Manager: Electricity Services
 - Senior Manager: Planning Services
- Director Corporate Services
- Director Planning and Economic Development
- Chief Financial Officer
 - Revenue management
 - Expenditure Management
 - Budget Preparation and Management
 - Supply Chain Management and Asset Management

3.1.2 EXTERNAL STAKEHOLDERS

The **External Stakeholders** identified on the Project include:

- National Department of Mineral Resources and Energy (“DMRE”)
- National Department of Public Works and Infrastructure (“DPWI”)
- Department of Co-Operative Governance and Traditional Affairs (“COGTA”)
- Department of Forestry, Fisheries and the Environment (“DFFE”)
- National Treasury Budget Office
- WCG Department of Agriculture
- WCG Department of Environmental Affairs and Development Planning (“DEADP”)
- WCG Department of Economic Development and Tourism (“DEDAT”)
- WCG Department of Infrastructure
- WCG Department of Local Government (“DLG”)
- WCG Department of the Premier – Premiers Energy Digicon
- WCG Provincial Treasury
- WCG Minister of Infrastructure (tbc)
- Franschhoek Ratepayers Association
- City of Cape Town Metropolitan Municipality (Neighbouring Municipality)
 - Electricity Generation and Distribution Department
 - Supply Chain Management Department
 - PPP Management Services
- Ekurhuleni Metropolitan Municipality – Energy Department
- Saldanha Bay Municipality – Department of Infrastructure and Planning Services

- Drakenstein Municipality – Directorate of Engineering Services (Neighbouring Municipality)
- Breede River Municipality (Neighbouring Municipality)
- Theewaterskloof Municipality (Neighbouring Municipality)
- Cape Winelands District Municipality – Technical Services Department
- Overberg District Municipality (Neighbouring District due to Theewaterskloof Municipality joint border)
- Development Funding Institutions (“**DFIs**”)
- Financial Institutions
- National Energy Regulator of South Africa (“**NERSA**”)
- Eskom Transmission, Eskom System Control, Eskom Western Cape Region
- South African Local Government Association (“**SALGA**”)
- South African Independent Power Producers Organisation
- South African Photovoltaic Industry Association (“**SAPVIA**”)
- Construction Industry Development Board (“**CIDB**”)
- Air Traffic Navigation Services (“**ATNS**”)
- South African Forestry Company SOC Limited (“**SAFCOL**”)
- Telkom
- Transnet
- Industrial Development Corporation of South Africa Ltd (“**IDC**”)
- The Council for Scientific and Industrial Research (“**CSIR**”)
- South African Agency for Science and Technology Advancement (“**SAASTA**”)
- Central Energy Fund (“**CEF**”) Group
- Development Bank of Southern Africa (“**DBSA**”)
- Universities and Technikons:
 - University of Cape Town
 - University of the Western Cape
 - Stellenbosch University
 - Cape Peninsula University of Technology
- Cape Chamber of Commerce – Winelands Chapter
- Cape Province Agricultural Association
- Devon Valley Farmers Association
- Women on farms Project
- Stellenbosse Landbougenootskap
- Wesgro (Tourism, Trade and Investment Promotion Agency for Cape Town and the Western Cape)
- Casidra (Cape Agency for Sustainable Integrated Development in Rural Areas)
- Cape Nature
- GreenCape
- IPP Project Owners/ Developers
- IPP Office
- Project Manager

- Transaction Advisor
- The Media
- Interested and Affected Parties (“**I&AP**”) / Other Interest Groups

3.2 STAKEHOLDER ANALYSIS

3.2.1 STAKEHOLDER CLASSIFICATION

To assist the Project in identifying stakeholders and their concerns, stakeholder analysis or mapping was applied. This is a way of determining who amongst the stakeholders have the most positive or negative influence on project development and ongoing performance. The goal of stakeholder mapping is to give the Municipality and the TA a more objective measure and understanding of the various groups of stakeholders, indicating which stakeholders require the most consideration.

Figure 3.1 illustrates that stakeholders can be divided into one (1) of four (4) groups when mapping them.

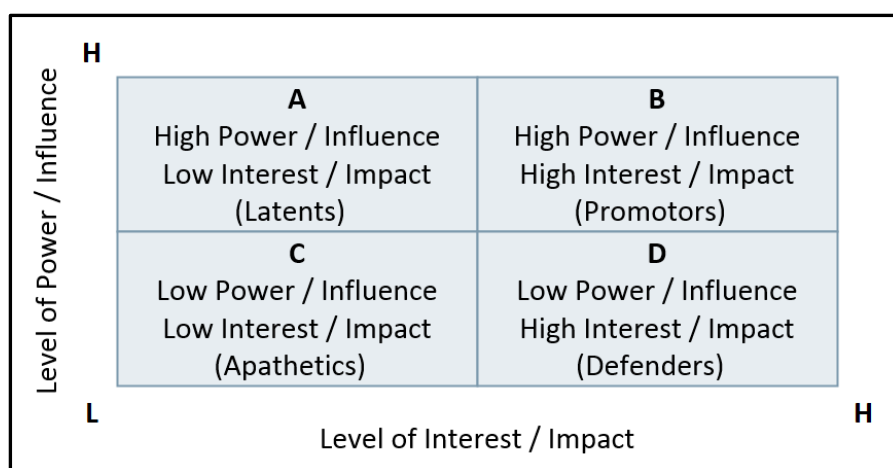


Figure 3.1: Power/Influence and Interest/Impact Matrix

The four stakeholder groups are detailed below:

A: Latents – have no interest or involvement in the Project but have the power to influence the Project greatly if they become interested.

B: Promoters – have great interest in the Project and have the power to make the Project successful or to derail it.

C: Apathetics – have little interest and power in the Project and may not even know of the Project’s existence.

D: Defenders – have a vested interest in the Project and can voice their opinion in the community but have little power to influence the Project in any way.

The PSC must direct the Project Management Team (i.e., the Municipality and WCG’s representatives) to engage with stakeholders to introduce the Project and manage the expectations of the different stakeholders.

3.2.2 STAKEHOLDER CLASSIFICATION MATRIX

Based on the 'Power/ Influence and Interest/ Impact' matrix a chart that consists of vertical and horizontal axis as shown in Figure 3.2 has been developed:

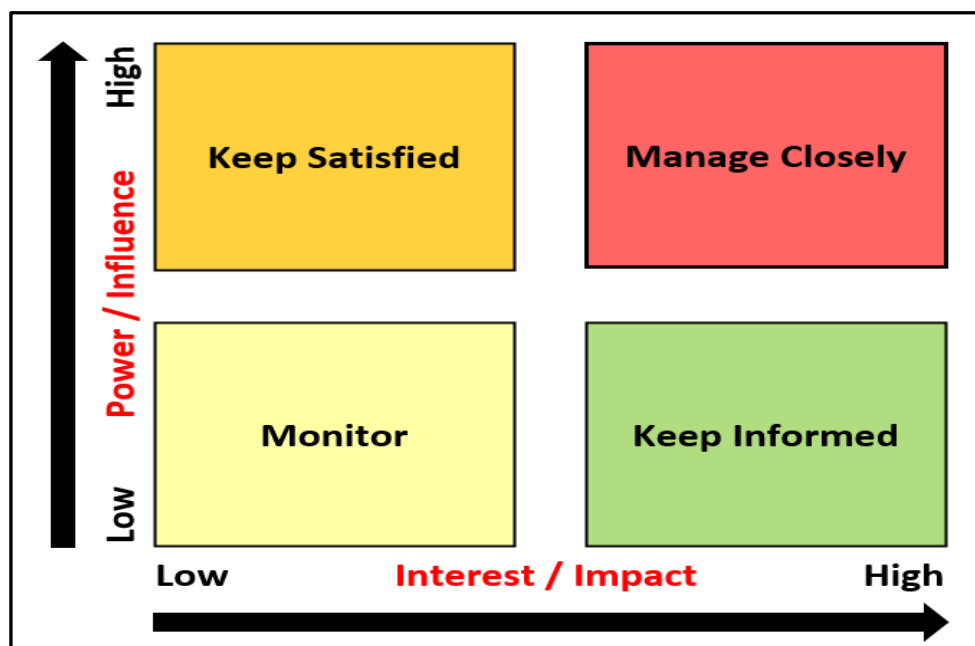


Figure 3.2: Stakeholder Classification Matrix

In this model, stakeholders are divided into four categories, namely:

Stakeholders with high power/ influence and high interest/ impact will be managed closely and with the utmost care.
Stakeholders with high power/ influence and low interest/ impact will be kept satisfied.
Stakeholders with low power/ influence and low interest/ impact require less effort than the rest. They will only be monitored.
Stakeholders with low power/ influence and high interest/ impact will be kept informed.

3.2.3 STAKEHOLDERS MAPPING AND ENGAGEMENT APPROACH

As a further classification, as indicated in paragraph 3.1.1 and 3.1.2, Project stakeholders are grouped into two categories, namely:

- Internal Stakeholders
- External Stakeholders

Table 3.1 and Table 3.2 overleaf depicts identified internal and external stakeholders which have been mapped and categorised based on their level of power and influence.

The following Stakeholders have been identified as Internal Stakeholders to the Project. Their level of involvement has been mapped out below as well as the approach in engaging them on Project related matters.

Table 3.1: Internal Stakeholder List

A		Latents High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B		Promoters High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C		Apathetics Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D		Defenders Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
1.	Municipality Political Structures	1.1	Alderman Gesie van Deventer	Executive Mayor	Mayor (Gesie Van Deventer) <Mayor@stellenbosch.gov.za>	The Mayor needs to be informed on Project progress and the decisions that are to be made by council. Due to the nature of the Project, it needs various decisions by the Municipal council through its development life cycle. The Municipal council may also consider delegating certain decision to the administration.	Client Information Progress Decision-making	High	High	Promotor	Manage closely	Council meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Council reports In person briefing Virtual briefing	Council meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		1.2	Councillor Quintin Smit	Speaker	Quintin Smit <Quintin.Smit@stellenbosch.gov.za>	As a result of the importance and sensitivity of the Project the Municipal council needs to be informed on progress and the decisions that are to be made by council. Due to the nature of the Project, it needs various decisions by the Municipal council through its development life cycle. The speaker is to assist in getting matters on the Council agenda and decisions where required	Client Information Progress Provide direction Decision-making Good governance	High	High	Promotor	Manage closely	Council meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Council reports In person briefing Virtual briefing	Council meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		1.3	Alderman Gesie van Deventer	Mayoral Committee	Mayor (Gesie Van Deventer) <Mayor@stellenbosch.gov.za>	The mayor is the chairperson of the Mayoral Committee. She needs to be well informed about the Project development and the overall pros and cons of the Project.	Client Information Progress Provide direction Decision-making	High	High	Promotor	Manage closely	Council meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Council reports In person briefing Virtual briefing	Council meetings Monthly / Quarterly progress reports At required milestones

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
							Good governance								At relevant decision-making points Ad hoc
		1.4	Councillor Jeremy Fasser	Deputy Mayor and Financial Services	Jeremy Fasser <Jeremy.Fasser@stellenbosch.gov.za>	As councillor responsible for Financial Services, he needs to be well informed of the Project development and possible risks the Project may have on the financial position of the Municipality.	Client Information Progress Provide direction Decision-making Good governance	High	High	Promotor	Manage closely	Council meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail MayCo reports In person briefing Virtual briefing	MayCo meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		1.5	Councillor Peter Johnson	Infrastructure	Peter Johnson <Peter.Johnson@stellenbosch.gov.za>	As councillor responsible for Infrastructure, he needs to be well informed of the Project development and possible risks the Project may have on the financial position of the Municipality.	Client Information Progress Provide direction Decision-making Good governance	High	High	Promotor	Manage closely	Mayoral Committee meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail MayCo reports In person briefing Virtual briefing	MayCo meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		1.6	Councillor Lwando Nkamisa	Corporate Services	Lwando Nkamisa <Lwando.Nkamisa@stellenbosch.gov.za>	As councillor responsible for Corporate Services, he needs to be well informed of the Project development and possible risks the Project may have on the financial position of the Municipality.	Client Information Progress Provide direction Decision-making Good governance	High	High	Promotor	Manage closely	Mayoral Committee meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail MayCo reports In person briefing Virtual briefing	MayCo meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
		1.7	Councillor Carli van Wyk	Planning, LED and Tourism	Carli Van Wyk <Carli.VanWyk@stellenbosch.gov.za>	As councillor responsible for Planning, LED and Tourism, she needs to be well informed of the Project development and possible risks the Project may have on the financial position of the Municipality.	Client Information Progress Provide direction Decision-making Good governance	High	High	Promotor	Manage closely	Mayoral Committee meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail MayCo reports In person briefing Virtual briefing	MayCo meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
2.	Municipality Administration	2.1	Geraldine Mettler	Municipal Manager	Geraldine .Mettler @stellenbosch.gov.za	As Municipal Manager she is accountable and responsible for the administration and implementation of the strategic objectives of the Municipality.	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		2.2	Annalene de Beer	Director: Corporate Service	Annalene De Beer <Annalene.DeBeer@stellenbosch.gov.za>	As Corporate Services Director she is among others responsible for the legal and human resource services of the Municipality. To fulfil a critical role in the when the legal positioning of the Project is considered; during procurement considering the legal matters in the procurement documents and accompanying Power Purchase Agreement (PPA) and its Schedules; negotiations, finalising the PPA and Schedules and the	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						management of PPA when concluded. Also to assist with navigating documents through the Municipal decision-making system.									
		2.3	Anthony Barnes	Director: Planning and Economic Development	Anthony Barnes <Anthony.Barnes@stellenbosch.gov.za>	As Planning and Economic Development Director he is among others responsible for the planning services and contribute to the economic development matters regarding the Project. To fulfil a critical role when land has been identified by IPPs that such land is classified correctly for the purposes of participating in the Project. Further, to understand and contribute to the Project that balance economic development objectives with the competitive element of the Project.	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		2.4	Kevin Carolus	Chief Financial Officer	Kevin Carolus <Kevin.Carolus@stellenbosch.gov.za>	As Chief Financial Officer he is responsible for among others the financial management and supply chain management aspects regarding the implementation of the strategic objectives of the Municipality. To fulfil a critical role in the revenue, expenditure, budget preparation and management, supply chain management and accounting interpretation of the Project.	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
		2.5	Pieter Wagener Henry Mitchell (Snr manager)	Revenue management	Pieter Wagener <Pieter.Wagener@stellenbosch.gov.za> Henry Mitchell <Henry.Mitchell@stellenbosch.gov.za>	To advise on the revenue implications the Project may hold to the Municipality	Client Information Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Finance team meetings	Meetings Project briefs Presentations Reports	E-mail Management reports In person briefing Virtual briefing	Management meetings At required milestones At relevant decision-making points Ad hoc
		2.6	Amanda Sondlo Henry Mitchell (Snr manager)	Expenditure Management	Amanda Sondlo <Amanda.Sondlo@stellenbosch.gov.za> Henry Mitchell <Henry.Mitchell@stellenbosch.gov.za>	To advise on the expenditure implications the Project may hold to the Municipality	Client Information Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Finance team meetings	Meetings Project briefs Presentations Reports	E-mail Management reports In person briefing Virtual briefing	Management meetings At required milestones At relevant decision-making points Ad hoc
		2.7	Monique Steyl	Budget Preparation and Management	Monique Steyl <Monique.Steyl@stellenbosch.gov.za>	To advise on the budget preparation and management implications the Project may hold to the Municipality	Client Information Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Finance team meetings	Meetings Project briefs Presentations Reports	E-mail Management reports In person briefing Virtual briefing	Management meetings At required milestones At relevant decision-making points Ad hoc

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
		2.8	Dalleel Jacobs	Supply Chain Management and Asset Management	Dalleel Jacobs <Dalleel.Jacobs@stellenbosch.gov.za>	To advise on the supply chain management implications the Project may hold to the Municipality	Client Information Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Finance team meetings	Meetings Project briefs Presentations Reports	E-mail Management reports In person briefing Virtual briefing	Management meetings At required milestones At relevant decision-making points Ad hoc
		2.9	Shane Chandaka	Director: Infrastructure Services	Shane Chandaka <Shane.Chandaka@stellenbosch.gov.za>	As director Infrastructure Services he is directly responsible for the development of the Project in terms of the implementation of the strategic objectives of the Municipality. To fulfil a critical role in providing direction, preparing reports, motivating reports and facilitate the Project progress.	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc
		2.10	Gary Boshoff	Director: Community and Protection Services	Gary Boshoff <Gary.Boshoff@stellenbosch.gov.za>	The Director Community and Protection Services has a critical role to fulfil among others in terms of the safety and protection of the community including citizens, visitors and business in the Municipality. His role in terms of this project will be to mainly advise on and facilitate the matters of site security and information dissemination when procurement documents are prepared as well as during	Client Information Progress Provide direction Facilitate decision-making Good governance	High	High	Promotor	Manage closely	Management meetings	Meetings Project briefs Presentations Milestone reports Reports	E-mail Management reports In person briefing Virtual briefing	Management / Director meetings Monthly / Quarterly progress reports At required milestones At relevant decision-making points Ad hoc

The following Stakeholders have been identified as External Stakeholders to the Project. Their level of involvement has been mapped out below as well as the approach in engaging them on Project related matters.

Table 3.2: External Stakeholder List

A		High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B		High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C		Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D		Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
1	National Department of Mineral Resources and Energy ("DMRE")	1.1	Mr Jacob Mbele	Director General Energy	Thobile.Mbatha@dmre.gov.za	DMRE is a key stakeholder and will be consulted to solicit their views during the various phases of the Project. The DMRE will also be consulted as part of the MFMA section 33 views and recommendations process.	Legislation Lessons learned Progress Oversight Policy development	High	High	Promoter	Manage closely	National government department meetings	In person meetings Virtual meetings	ERA Section 34 engagement (if required)	As and when required Legislative determination
2	National Department of Public Works and Infrastructure ("DPWI")	2.1	Mr Sifiso Mdakane	Director General	Postal Private Bag X65, Pretoria, 0001 Physical 256 Madiba Street, Pretoria Tel 012 406 1000 Web www.publi cworks.gov.za	DPWI land may be used for the development of the Project. Is the custodian of national infrastructure development.	Approval of land lease for Bidders / suppliers (if applicable)	High	Low	Latent	Keep satisfied	National government department meetings	In person meetings Virtual meetings Project progress briefs	E-mail Relevant reports In person briefing Virtual briefing	As and when required
3	Department of Co-Operative Governance and Traditional Affairs ("COGTA")	3.1	Mbulelo Tshangana	Director General	info@cogta.gov.za	Provide views and recommendations in terms of the MFMA section 33 requirements.	Lessons learned Progress Oversight Views and recommendations	High	Low	Latent	Keep satisfied	National government department meetings	In person meetings Virtual meetings Project progress briefs	E-mail Relevant reports In person briefing Virtual briefing	As and when required As per MFMA section 33 requirements
4	Department of Forestry, Fisheries and the	4.1	Ms Nomfundo Tshabalala	Director-General	dg@dffe.gov.za	Consult on climate change objectives and support mechanisms and developments in respect of carbon tax.	Lessons learned Progress Oversight Project support	High	Low	Latent	Keep satisfied	National government	In person meetings Virtual meetings	E-mail Relevant reports In person briefing	As and when required

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
	Environment ("DFFE")					Interested in national environmental matters.						department meetings	Project progress briefs	Virtual briefing	
5	National Treasury Budget Office	5.1	Dr DUNCAN Pieterse	Director General	DGRegistry@treasury.gov.za	National Treasury is a key stakeholder and will be consulted to solicit their views as part of the MFMA section 33 views and recommendations required. It would be advisable to inform National Treasury of the project's commencement and provide regular updates in respect of the progress made in the development and implementation of the Project. Consultation with National Treasury may also be required, in relation to new national regulations on preferential procurement (in terms of the Public Procurement Bill 2023, if that is passed and comes into effect during the procurement phase).	Lessons learned Progress Oversight Governance Project development support Views and recommendations Compliance of project with standard best practice policy Potential of project to stimulate policy development	High	High	Promoter	Manage closely	National government department meetings	In person meetings Virtual meetings Project progress briefs	E-mail Relevant reports In person briefing Presentations Virtual briefing	As and when required Milestone reports As per MFMA section 33 requirements
		5.2	Edgar Sishi	DDG: Budget Office	Personal Assistant: Gundo.Nemataheni@Treasury.gov.za										
		5.3	Mr Shabeer Khan	Office of the Accountant General	Personal Assistant: Mositlhi.Matshedisho@Treasury.gov.za										
6	Department of Agriculture, Land Reform and Rural Development	6.1	Mr Mooketsa Ramasodi	Director-General: Department of Agriculture Land Reform and Rural Development	DGOOffice@dalrrd.gov.za	Provide approval for long term lease (I required) on agricultural land in terms of the Alienation of Land Act. Bidders may need the assistance of the Department of Agriculture, Land Reform and Rural Development depending on the specific circumstances.	Lessons learned Oversight Legislative approval	High	Low	Latent	Keep satisfied	National government department meetings	In person meetings Virtual meetings Project progress briefs	E-mail Relevant reports In person briefing Virtual briefing	As and when required
7	WCG Department of Agriculture	7.1	Dr Mogale Sebopetsa	Head of Department	DOA.Info@westerncape.gov.za	Have contact with the agricultural community of Stellenbosch and can inform interested parties	Disseminator of information.	Low	Low	Defenders	Keep informed	Provincial government meetings	Virtual meetings	E-mail Virtual briefing Provincial meetings	As and when required

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
8	WCG Department of Environmental Affairs and Development Planning ("DEADP")	8.1	Gerhard Gerber	Head of Department	enquiries.eadp@westerncape.gov.za	The DEADP mission is to promote a resilient, sustainable, quality and inclusive living environment in support of human well-being. They are to handle environmental applications by Bidders.	Provide environmental permits and approve environmental plans	High	High	Promoters	Manage Closely	Provincial government meetings	Virtual meetings Reports Applications for approval	E-mail Virtual briefing Provincial meetings	As and when required
9	WCG Department of Economic Development and Tourism ("DEDAT")	9.1	Jo-Ann Johnston	Acting Departmental Head	ecohead@westerncape.gov.za	Interested in the economic value-add of the proposed projects	Promote the project Provide Project enabling support	High	High	Promoters	Manage Closely	Provincial government meetings	Virtual meetings Reports	E-mail Virtual briefing Provincial meetings	As and when required
10	WCG Department of Infrastructure	10.1	Advocate Chantal Smith	Acting Head of Department	hod.infrastructure@westerncape.gov.za	In respect of economic development, consultation on approach to driving/incentivising socio-economic development outcomes and bid assessment criteria regarding the subject of economic development.	Lead Project Project management of Project Lessons learned Oversight Engage with national government departments as and when and where necessary Disseminate the project information in the Western Cape Province	High	High	Promoters	Manage Closely	Provincial government meetings Stellenbosch Municipality meetings	Virtual meetings Progress reports Reports	E-mail Virtual briefing Meetings Provincial meetings Steering Committee meetings	As and when required At required milestones Weekly and / / bi-weekly
		10.2	Dr Gavin Kode	Deputy Director general, Acting Head of Branch: Strategy, Policy and Coordination	gavin.kode@westerncape.gov.za										
		10.3	Tim Parle	Chief Director: Energy	tim.parle@westerncape.gov.za										
11	WCG Department of Local Government ("DLG")	11.1	Graham Paulse	Head of Department	Graham.Paulse@westerncape.gov.za	The DLG supports and strengthens the capacity of municipalities to manage their own affairs and is responsible for promoting good governance	Oversight Disseminator of the Project story Maintain objectivity Audit outcomes	High	High	Promoters	Manage Closely	Provincial government meetings	Virtual meetings Progress reports Reports	E-mail Virtual briefing Meetings Provincial meetings	As and when required At required milestones

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						in local authorities to enhance municipal service delivery. Has a keen interest in the management of municipal budgets. The DLG will be consulted and updated throughout the Project phases as appropriate.	Good governance							In person engagements	
12	WCG Department of the Premier	12.1	Dr Harry Malila	Director General	Harry.Malila@westerncape.gov.za	The WCG will be updated on key milestones and consultations will be considered when appropriate. The Premier's Energy Digicon's may be an ideal platform to raise awareness for the Project.	Oversight Disseminator of the Project story Maintain objectivity Project finalisation / implementation	High	High	Promoters	Manage Closely	Provincial government meetings	Virtual meetings Progress reports Reports	E-mail Virtual briefing Meetings Provincial meetings In person engagements	As and when required At required milestones
13	WCG Provincial Treasury	13.1	Julinda Gantana	Head: Provincial Treasury	services@westerncape.gov.za	The WCG Treasury is a key stakeholder and will be consulted to solicit their views as part of the MFMA section 33 views and recommendations required. It would be advisable to inform WCG Treasury of the project's commencement and provide regular updates in respect of the progress made in the development and implementation of the Project.	Lessons learned Progress Oversight Governance Project development support Views and recommendations Compliance of project with standard best practice policy Potential of project to stimulate policy development	High	High	Promoters	Manage Closely	Provincial government meetings	Virtual meetings Progress reports Reports	E-mail Virtual briefing Meetings Provincial meetings In person engagements	As and when required Milestone reports At required milestones
14	Stellenbosch Ratepayer Association	14.1	Andre Pelser	Chairman	info@stellenboschrates.org	The local community's voice in government.	Have the interest of the Stellenbosch	Low	High	Defenders	Keep informed	Community briefings Expression of Interest	Presentations Community information	Project briefing notes E-mail Virtual briefing	As and when required At required milestones

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D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
18	Cape Winelands District Municipality – Technical Services Department	18.1	Francois van Eck	Executive Director: Technical Services	Francois@capewinlands.gov.za	The district is divided into five subdistricts, each with their own local municipality. These are Stellenbosch, Drakenstein, Witzenberg, Breede Valley and the Langeberg Municipalities. It is possible that consultation with the district municipality may be required if this project has wider impacts on the district, and especially on Drakenstein Municipality given that this area is well suited for wind generation (current and future). The district is empowered to generate bulk electricity.	Lessons learned Information sharing	Low	Low	Apathetics	Monitor	Meetings	In person meetings Virtual meetings Information sharing presentations	E-mails In person engagements	As and when required
19	City of Ekurhuleni Metropolitan Municipality – Energy Department	19.1	Tshilidzi Thenga	Head of Department: Energy	Tshilidzi.Thenga@ekurhuleni.gov.za	The Energy Department is among others to distribute electricity in an effective, efficient, equitable and sustainable manner; to apply appropriate standards; to make optimal use of resources; and to consider the environmental and developmental needs.	The City of Ekurhuleni is in the process of procuring energy from IPPs. Lessons learned Information sharing	Low	Low	Apathetics	Monitor	Meetings	In person meetings Virtual meetings Information sharing presentations	E-mails In person engagements	As and when required
20	City of Johannesburg	20.1	Tebogo Modiba (Acting)	Environment, Infrastructure and Services Department: Executive Director	TebogoModiba@joburg.org.za	The City of Johannesburg is in the process of procuring energy from IPPs through its municipal entity, City Power. Municipality in Gauteng	The City of Johannesburg is in the process of procuring energy from IPPs. Lessons learned Information sharing	Low	Low	Apathetics	Monitor	Meetings	In person meetings Virtual meetings Information sharing presentations	E-mails In person engagements	As and when required
21	City Power	21.1	Mongezi Ntsokolo	CEO	To be updated by the Municipality	City Power, a municipal entity of the City of Johannesburg, is in the process of procuring energy through IPPs on behalf of the City of Johannesburg.	The City of Johannesburg is in the process of procuring energy from IPPs. It is assumed that	Low	Low	Apathetics	Monitor	Meetings	In person meetings Virtual meetings	E-mails In person engagements	As and when required

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												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
							City Power is being used as the procuring agent. Lessons learned Information sharing						Information sharing presentations		
22	Development Funding Institutions ("DFIs")	22.1	African Development Bank (AfDB),	Ms Leïla Farah Mokadem	l.mokadem@afdb.org [undefined:l.mokadem@afdb.org]	Consultation on the financial structure for the Project bidders / suppliers, performance guarantee requirements, bid bond and its impact on Project bankability.	Project Finance (equity, mezzanine and debt) / Sponsors. Application of funds in accordance with terms of financing agreement. Providers of finance (equity, mezzanine and debt) to the bidders / service providers. Project development support, grants and project enabling support.	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails Invitation to Expression of Interest briefing Session	E-mails In person engagements Virtual meetings	As and when required
			Development Bank of Southern Africa (DBSA), .	Ms Boitumelo Mosako,	dbsa@dbsa.org										
			Export Credit Insurance Corporation (ECIC),	Ntshengedzeni Gilbert Maphula	info@ecic.co.za										
			Industrial Development Corporation (IDC), and	As before											
			New Development Bank (NDB)	Leslie Maasdorp	enquiries.arc@ndb.int										
23	Financial, Investment, and Insurance Institutions	23.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	Consultation on the financial structure for the Project bidders / suppliers, performance guarantee requirements, bid bond and its impact on Project bankability.	Project Finance (equity, mezzanine and debt) / Sponsors. Application of funds in accordance with	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual	Project briefing In person meetings Information sharing sessions	E-mails In person engagements Virtual meetings	As and when required

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												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						To be contacted through the respective industry bodies.	terms of financing agreement. Providers of finance (equity, mezzanine and debt) to the bidders / service providers.					One-on-one meetings	E-mails Invitation to Expression of Interest briefing Session		
24	"Climate Change" Funds	24.1	Green Climate Fund (GCF) Climate Change Investment Fund (CIF) Africa Climate Change Fund DBSA SANBI SA Climate Change Respons Fund AUDA-NEPAD <u>South Africa's Just Energy</u>	To be updated by the Municipality	To be updated by the Municipality	There are specific managed funds that have a "climate change" mandate. This being a project that may lower low carbon emissions.	Concessionary funding	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required

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No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
			<u>Transition Investment Plan</u>												
25	The National Energy Regulator of South Africa (NERSA)	25.1	Adv NP Sithole	CEO	info@nersa.org.za	NERSA's mandate among others is the mandate of the Electricity Regulation which is the Economic Regulation of the electricity industry and is derived from the Electricity Regulation Act. NERSA may also be responsible for licensing and/ or registering (if required by law) IPPs which are successful in relation to the Project. Based on current exemptions under Schedule 2 of the ERA, licensing is unlikely to be required.	The national energy regulator Keep registers Monitor compliance Governance Lessons learned Information sharing	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings Certain requests for approval or registration	As and when required
26	Eskom / National Transmission Company South Africa	26.1	Segomoco Scheppers –	Group Executive: Transmission	segomoco.scheppers@eskom.co.za	National generator and transmission company. May have to make use of the transmission facilities and get agreement on load shedding or load curtailment.	Need agreement on matters identified in Project Monitor compliance Governance Lessons learned Information sharing	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings Certain requests for approval negotiations	As and when required
27	National Transmission Company South Africa	27.1	Not yet Established	Not yet Established	Not yet Established	NERSA approved the transfer of Eskom's powers and duties regarding the transmission of electricity to the National Transmission Company of South Africa (NTCSA) The project may require the transmission of electricity from one intake point to another	NTCSA may act as a transmitter of electricity between Stellenbosch Municipality's electricity intake points. Lessons learned	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings Certain requests for approval Negotiations	As and when required

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No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						making use of the NTCSA's infrastructure.	Information sharing								
28	IPP Office	28.1	IPP Office delegated official	IPP Office assigned representative	info@ipp-projects.co.za	Leading the national procurement of energy under ERA section 34 determinations To give effect to the procurement process and implementation of the relevant capacity allocations of the IRP, the Minister of Mineral Resources and Energy (in consultation with the NERSA) determines new electrical energy generation capacity requirements, as allowed by Section 34 of the Electricity Regulation Act No.4 of 2006. The procurement of new, renewable energy, generation capacity from IPPs in order to meet the national commitment of transition to a low carbon economy and ensure security of energy supply.	Information sharing Lessons learned Dissemination of information Potential of Project to stimulate policy development	Low	Low	Apathetics	Monitor	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
29	South African Local Government Association ("SALGA")	29.1	Sithole Mbanga	CEO	tmosala@salga.org.za	South African Local Government Association (SALGA) is an autonomous association of all 257 South African local governments, comprising of a national association, with one national office and nine provincial offices. Membership of the association is voluntary. SALGA accounts to its members in terms of the SALGA Constitution (as amended in 2016) and its Governance Framework regulating its	Dissemination of information Lessons learned Information sharing	High	High	Promoters	Manage Closely	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required

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												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						structures and mandating processes.									
30	South African Independent Power Producers Association ("SAIPPA")	30.1	Brian Day	Chairman	Jean@vdw.co.za	Interested parties / Bidders may be members of SAIPPA. Consultation to obtain a better understanding of projects that may be under development in the municipal area.	Representing interested parties / Bidders Dissemination of information conduit to its members Lessons learned Information sharing	Low	High	Defender	Keep informed	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
31	South African Photovoltaic Industry Association ("SAPVIA")	31.1	Norman Moyo	Chairperson	info@sapvia.co.za	SAPVIA's vision is for solar PV to be a significant and reliable contributor to the energy mix of South Africa. Consultation to obtain a better understanding of projects that may be under development in the municipal area.	Representing interested parties / Bidders Dissemination of information conduit to its members Lessons learned Information sharing	High	High	Promoters	Keep informed	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
32	Construction Industry Development Board ("CIDB")	32.1	Bongani Dladla	CEO	cidbwc@cidb.org.za	Construction companies may be employed by Bidders to be included in their bids as construction "partners" / contractors of energy facilities to be developed.	Members may act as construction company to interested parties / Bidders Dissemination of information conduit to its members Lessons learned Information sharing	Low	High	Defender	Keep informed	Conference Group briefing sessions in person and virtual One-on-one meetings	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
33	Air Traffic Navigation	33.1	Ms Nozipho Mdawwe	CEO	PercyMO@atns.co.za	Legal requirement to list/register solar plants	Compliance	Low	High	Defenders	Keep informed	In person and virtual	In person meetings	E-mails In person engagements	As and when required

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No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
	Services ("ATNS")											One-on-one meetings	Information sharing sessions E-mails	Virtual meetings Compulsory documentation	
34	SAFCOL	34.1	S Dlamini	CEO	info@safcol.co.za	Landowner and may be interested in offering land for the development of the Project.	Provider of land	Low	Low	Apathetics	Monitor	Virtual meeting	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
35	Telkom	35.1	Serame Taukobong, Mr	CEO	telkom.foundation@telkom.co.za	Landowner and may be interested in offering land for the development of the Project.	Provider of land	Low	Low	Apathetics	Monitor	Virtual meeting	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
36	Transnet	36.1	Portia Derby, Ms	CEO	enquiries@transnet.net	Landowner and may be interested in offering land for the development of the Project.	Provider of land	Low	Low	Apathetics	Monitor	Virtual meeting	Project briefing In person meetings Information sharing sessions E-mails	E-mails In person engagements Virtual meetings	As and when required
37	IDC	37.1	Nazlie Hassen	Eastern Cape: Regional Administrator	Nazlieh@idc.co.za	Potential financing partner to Bidders / Suppliers	Financier to Bidders / Suppliers	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
38	Council for Scientific and Industrial	38.1	Thulani Dlamini, Dr	CEO	enquiries@csir.co.za	The CSIR is a leading scientific and technology research organisation that researches, develops, localises and diffuses	Information sharing Lessons learned	Low	Low	Apathetics	Monitor	Virtual meeting	Project briefing E-mails	E-mails In person engagements	As and when required

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												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
	Research ("CSIR")					technologies to accelerate socioeconomic prosperity in South Africa. The organisation's work contributes to industrial development and supports a capable state. The CSIR have may be interested in technical solutions and in some consultation work to execute their mandate.	Dissemination of information					Briefing session		Virtual meetings Briefing session	
39	South African Agency for Science and Technology Advancement ("SAASTA")	39.1	Dr. Mamoetsi Mosia	Executive Director	MM.Mashiane@saasta.nrf.ac.za	The SAASTA is a business unit of the National Research Foundation (NRF) with the mandate to advance public awareness, appreciation and engagement of science, engineering, innovation and technology in South Africa.	Information sharing Lessons learned Dissemination of information	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
40	CEF Group	40.1	Ishmael Poolo, Dr	CEO	cefcomms@cefgroup.co.za	CEF SOC Ltd. is involved in the search for appropriate energy solutions to meet the energy needs of South Africa, the Southern African Development Community and the sub-Saharan African region, including oil, gas, electrical power, solar energy, low-smoke fuels, biomass, wind and renewable energy sources.	Information sharing Lessons learned Dissemination of information Possible provider of project development support	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
41	Development Bank of Southern Africa ("DBSA")	41.1	Patrick Dlamini, Mr	CEO	Patrickd@dbsa.org	The DBSA is a government-owned development finance institution with the mandate to promote economic growth as well as regional integration for sustainable development projects and programmes across the African continent.	Financier to Suppliers Possible provider of project development support	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required

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No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
42	University of Cape Town	42.1	Professor Mamokgethi Phakeng	Vice-Chancellor/Rector	vc@uct.ac.za	The University of Cape Town is a public research university in Cape Town. It may have a keen interest in the development of the project from among others an engineering, financial, economic, socio-economic and policy development and execution perspective.	Information sharing Lessons learned Dissemination of information	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
43	University of the Western Cape	43.1	Professor Tyrone Pretorius	Vice Chancellor/Rector	info@uwc.ac.za	The University of the Western Cape is a public research university in Bellville. It may have a keen interest in the development of the project from among others an engineering, financial, economic, socio-economic and policy development and execution perspective.	Information sharing Lessons learned Dissemination of information	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
44	Stellenbosch University	44.1	Prof. Wim de Villiers	Vice-Chancellor/Rector	vc@sun.ac.za	Stellenbosch University is a public research university situated in Stellenbosch. It may have a keen interest in the development of the project from among others an engineering, financial, economic, socio-economic and policy development and execution perspective. It is an existing service provider to the Stellenbosch Municipality on electricity matters.	Information sharing Lessons learned Dissemination of information	Low	High	Defender	Keep Informed	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
45	Cape Peninsula University of Technology	45.1	Prof Chris Nhlapo	Vice Chancellor	vc@cput.ac.za	Cape Peninsula University of Technology is a university in Cape Town. It is the only university of technology in the Western Cape province.	Information sharing Lessons learned Dissemination of information	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required

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B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						It may have a keen interest in the development of the project from among others an engineering, financial, economic, socio-economic and policy development and execution perspective.									
46	Cape Chamber of Commerce – Winelands Chapter	46.1	John Lawson	CEO	info@capechamber.co.za	Has a broad business membership whose members may have a keen interest in the project's development and to participate in some aspects of the Project value chain.	Information sharing Lessons learned Dissemination of information	High	High	Promotor	Manage Closely	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
47	Agri Western Cape	47.1	Jannie Strydom	CEO	info@awk.co.za	Agri Western Cape is a voluntary membership organisation that represents commercial farmers in the Western Cape. Their members may have access to land on which PV plant may be established.	Information sharing Lessons learned Dissemination of information Conduit to available land	High	High	Promotor	Manage Closely	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
48	Devon Valley	48.1	No Person found	No Person found	info@devonvalleyvine.co.za	The Devon Valley market their offerings under the D'Vine Valley brand name. Their members may have access to land on which PV plant may be established.	Information sharing Lessons learned Dissemination of information Conduit to available land	High	High	Promotor	Manage Closely	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
49	Women on Farms Project ("WFP")	49.1	To be updated by the Municipality	To be updated by the Municipality	reception@wfp.org.za	Women on Farms Project (WFP) is a South African feminist organisation operating in the Northern and Western Cape that works with women who live and work on commercial farms. WFP seeks to empower farm women primarily through rights-based capacity building as well as support for their organisation in community-	Information sharing Lessons learned Dissemination of information Conduit to available land Active participant	High	High	Promotor	Manage Closely	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						based structures. WFP enables farm women to know and claim their rights. Recent campaigns among others have targeted feminist-centred land redistribution. Their members may have access to land on which PV plant may be established. May also fulfil a role in the economic development aspects of the Project									
50	Stellenbosch Ratepayers Association	50.1	Repeat of Item 14	Repeat of Item 14	Repeat of Item 14	The Stellenbosch Ratepayers Association represent Stellenbosch ratepayers and strives to be the local community's voice in government.	Information sharing Lessons learned Dissemination of information	Low	High	Defenders	Keep informed	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
51	Stellenbosse Landbougenootskap	51.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	Association of landowners.	Information sharing Lessons learned Dissemination of information Conduit to available land	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
52	Wesgro (Tourism, Trade and Investment Promotion Agency for Cape Town and the Western Cape)	52.1	Wrenelle Stander	Chief Executive Officer	Wrenelle@wesgro.co.za	Wesgro is the official tourism, trade, and investment promotion agency for Cape Town and the Western Cape.	Information sharing Lessons learned Dissemination of information Conduit to available land	Low	High	Defenders	Keep informed	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
		52.2	Garthe van der Horst	Chief Trade and Investment Officer	info@wesgro.co.za										
		52.3	Jean Scheltema	Chief Marketing and Innovation Officer	info@wesgro.co.za										

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
53	Casidra (Cape Agency for Sustainable Integrated Development in Rural Areas)	53.1	Dr Keith du Plessis	Chief Executive Officer	info@casidra.co.za	Casidra renders a project management service to Departments within the WCG, local authorities, businesses, non-governmental organisations (NGO's) community-based organisations (CBO's), academic institutions, other governmental agencies and international assistance institutions.	Information sharing Lessons learned Dissemination of information Conduit to available land	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
54	Cape Nature	54.1	Dr Ashley Naidoo	CEO	customercare@capenature.co.za	CapeNature is a governmental organisation responsible for maintaining wilderness areas and public nature reserves in Western Cape Province.	Information sharing Lessons learned Dissemination of information Conduit to available land	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
55	GreenCape	55.1	Michael Mulcahy	CEO	michael@greencape.co.za	GreenCape supports businesses and investors in the green economy to remove barriers to establishment and growth. It also support local, provincial and national government to build a resilient green economy	Information sharing Lessons learned Dissemination of information	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
56	IPP Project Owners/ Developers	56.1	Website blocked – not private	Website blocked – not private	Website blocked – not private	Economic development consultation to receive experience and insight on the most cost efficient and impactful approaches to driving socio-economic development outcomes.	Information sharing Lessons learned Dissemination of information Conduit to available land Available land Compliance of Project with policy	Low	High	Defenders	Keep informed	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project’s existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
57	Project Manager (“Pegasys”)	57.1	Deon Louw	Project Manager	deon@pegasys.co.za	Procured as the Project Manager for the Project.	Project Manager appointed for the Feasibility Phase Project Manager appointed for the Procurement phase (if any)	High	High	Promoter	Manage Closely	Member of PSC Member of bi-weekly check in meetings As and when required	Reports Monthly / bi-weekly / weekly interaction	E-mails Virtual meetings In person meetings Briefing session	When appropriate Structured monthly / bi-weekly / weekly interaction
		57.2	Pitsi Matshira	Assistant Project Manager	Pitsi@pegasys.co.za										
		57.3	Peter Koch	Project Lead	peter@pegasys.co.za										
		57.4	Janah Miller	Legal Support	janah@pegasys.co.za										
		57.5	Elizabeth Hastings	Legal Support	elizabeth@pegasys.co.za										
58	Transaction Advisor (“Cresco Advisory Consortium”)	58.1	Francois Viljoen	Project Director	francois@crescogroup.africa	Procured as the Transaction Advisor for the Project.	TA appointed for the Feasibility Phase TA appointed for the Procurement phase (if any)	High	High	Promoter	Manage Closely	Member of PSC Member of bi-weekly check in meetings As and when required	Reports Monthly / bi-weekly / weekly interaction	E-mails Virtual meetings In person meetings Briefing session	When appropriate Structured monthly / bi-weekly / weekly interaction
		58.2	Vanessa Snyman	IPP Lead Advisor	vanessa.snyman@verteadvisory.co.za										
		58.3	Johan Louw	Senior Advisor	JLouw@turntown.co.za										
		58.4	Ntombi Magoro	Project Management	NMagoro@turntown.co.za										
		58.5	Kobus Van Der Watt	Programme Planner	KVanDerWatt@turntown.co.za										
		58.6	Andrew Johnson	Technical Specialist	Andrew.Johnson@oegafrika.com										
		58.7	Enriko Fourie	Lead Financial Advisor	enriko@crescogroup.africa										
		58.8	Pippa Reyburn	Lead Legal Advisor	preyburn@ensafrica.com										

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
		58.9	Paul Jackson	Lead Economic Development	paul.jackson@edplatform.com										
59	Suppliers of equipment and services	59.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	Suppliers of equipment and services to potential bidders	Information sharing Dissemination of information Supply Bidders Provide advice to bidders	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
60	Landowners	60.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	Those who own portions of land.	Information sharing Lessons learned Dissemination of information Conduit to available land Available land	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required
61	Stellenbosch Interest Group	61.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	The Stellenbosch Ratepayers Association represent Stellenbosch ratepayers and strives to be the local community's voice in government.	Information sharing Lessons learned Dissemination of information	Low	High	Defenders	Keep informed	Virtual meeting Briefing session	Project briefing E-mails	E-mails In person engagements Virtual meetings Briefing session	As and when required
62	Trans-Caledon Tunnel Authority (TCTA)	62.1	Percy Sechemane	Chief Executive Officer	To be updated by the Municipality	Trans-Caledon Tunnel Authority (TCTA) is a state-owned entity charged with financing and implementing bulk raw water infrastructure projects. They have an arrangement with City of Cape Town to provide them with water. However, the Berg River Dam which is in the Franschhoek and in the Stellenbosch jurisdictional area.	Interested party with physical space to setup a solar plant. Information sharing Lessons learned Dissemination of information Conduit to available land Active participant	Low	Low	Apathetics	Monitor	Virtual meeting Briefing session	Project briefing E-mails	E-mails Virtual meetings Briefing session	As and when required

A	Latents	High power / influence; Low interest impact (no interest or involvement but have the power to influence greatly if they become interested)										Keep Satisfied			
B	Promoters	High power / influence; High interest impact (have great interest in the Project and the power to make it successful or to derail it)										Manage Closely			
C	Apathetics	Low power / influence; Low interest impact (have little interest and power and may not even know of the Project's existence)										Monitor			
D	Defenders	Low power / influence; High interest impact (have a vested interest and can voice their opinion in the community but have little power to influence the Project in any way)										Keep Informed			
No.	Stakeholder	No.	Name of representative	Position	E-mail Address	Nature of Relationship	Role / Function / Interest Type / Concern	Level of Power / Influence	Level of Interest / Impact	Stakeholder Mapping Category	How to Manage	Approach in Engagement			
												Meetings	Structured Method of Engagement	Type of Communication	Frequency of engagement
						The surface area of the reservoir is 488 hectares – most probably when full, but even half or a quarter of this may do.									
63	Interested and Affected Parties (I & AP) / Other Interest Groups	63.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	All Interested and Affected Parties not already identified above, including the community and other Interest Groups in the IPP Industry/ Energy Sector.	Interested in the project implementation	Low	High	Defenders	Keep Informed	As and when required	Reports Ad hoc meetings	E-mails Virtual meetings Briefing session	As and when required
		63.2	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality										
		63.3	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality										
		63.4	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality										
64	The Media	64.1	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality	The purpose of the media is to educate, inform and entertain through news, features and analysis in the press. They also produce documentaries, dramas, current affairs, programmes, public service announcements, magazine programmes and other forms of programming for radio and television.	Interested in the Project implementation	Low	High	Defenders	Keep Informed	As and when required	Project briefings Ad hoc meetings	E-mails Virtual meetings Briefing session	As and when required
		64.2	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality										
		64.3	To be updated by the Municipality	To be updated by the Municipality	To be updated by the Municipality										

3.3 STAKEHOLDER ENGAGEMENT AND CONTROL

Due to the level of confidentiality of the discussions and meetings with all stakeholders, the notes or minutes will be kept by the Municipality and not be distributed to any third party, without written consent of the relevant stakeholder(s).

Minutes of public stakeholder meetings will be distributed to the attendees by the Municipality.

An outline of meetings that were held with Stakeholders during the Feasibility phase is included as ***Annexure 1***.

4. OWNERSHIP OF THE STAKEHOLDER ENGAGEMENT

The Municipality, with the support of the TA, is managing the stakeholder engagement process for the Project during the Feasibility Study and Procurement Phases of the Project. The preferred bidder(s) or IPP(s) appointed as result of the procurement process (“Private Party”) will take ownership of the Special Purpose Vehicle (“**SPV**”) stakeholder engagement in collaboration with the Municipality. Employing a well thought-through stakeholder management strategy will ensure that expectations of stakeholders are appropriately managed to retain stakeholders support throughout the Project development life cycle.

5. COMMUNICATION STRATEGY

5.1 COMMUNICATION OBJECTIVES

Effective communication is a critical element of the success of the stakeholder engagement process. As was highlighted in the sections above different stakeholders may have different interests, attitudes and priorities. Effective communication thus ensures that stakeholders receive information that is relevant to their needs and builds positive attitudes to the Project.

5.2 COMMUNICATION APPROACH

5.2.1 COMMUNICATION METHODS

To ensure relevant coverage to the Project, the following processes shall be implemented and will be continued to be used as part of the stakeholder engagement process:

5.2.1.1 *Direct Communication*

Communication via direct contact with stakeholders via meetings and workshops.

5.2.1.2 *Specific Interview*

Specific one on one meetings as scheduled between relevant stakeholders with the Municipality to discuss matters related to the Project.

5.2.1.3 *Print Media*

The following print media can be utilised as appropriate for each stage of the procurement process of the Project and depending on the purpose of engagement:

- The procurement documents will be advertised in print media. The Municipality with the assistance of the TA will advise on the appropriate media to reach the widest possible market.
- Relevant Project documents will be made available for public viewing and comment at the appropriate time in the Project development life cycle and as provided for in legislation.
- Relevant project information and advertisements will also be placed on the Municipality website and other external electronic portals as well as other communication channels as identified by the Municipality from time-to-time.

5.2.1.4 *Electronic Media*

As indicated above and among others electronic media will be employed to promote the Project. The following electronic media strategy will be employed:

- Notices and information about the Project will be posted onto the Municipality website on a quarterly basis.

- As stated above, certain selected key stakeholders will be invited to the meetings via e-mail.
- Advertisements to inform the market of Project progress and events may be placed on selected electronic media, other than the Municipality website, from time-to-time. The specific electronic media will be selected at the time and will be influenced by the type of message that is to be conveyed.
- Information in relation to the procurement processes may be placed on the Municipality website and other electronic portals.

5.2.2 ENGAGEMENT LEVELS

The level and the timing of engagement is determined by the various stages of the Project development life cycle:

- Some stakeholders will be invited to comment on the draft technical reports.
- All stakeholders will be engaged with on a regular basis and feedback on the Project throughout different platforms (stakeholder engagement meetings, Steercom meetings, and specific one-on-one sector engagement) will be documented as required and as guided by this stakeholder management plan.

5.2.3 DOCUMENTS REQUIRED FOR THE ENGAGEMENT

The following documents may be required for the engagement:

- Background information documents to be drafted as relevant taking into account the requirement of the Project development life cycle
- Newsletters
- Advertisements

Brochures available in local language (English/ Afrikaans /Xhosa). Note: The period for translation of the documents, depending on size/ content of document (large document approximately 10 days) to be taken into account.

5.3 COMMUNICATION PLAN

It is possible that communication with regards to the Project may not reach each individual resident and or interest group in and around the Stellenbosch community area including organizations and communities that are either interested or affected by this Project. Thus, a communication plan has been compiled below to guide and illustrate the engagement with representative groups of stakeholders around the area to show a structured approach with regard to communication in relation to the Project.

Table 5.1: Communication Plan (All Stakeholders)

No.	Stakeholder Group	Focus	Message/ Purpose	Frequency	Timeframe/ Date	Responsibility	Mechanism/ Documentation
1.	Provincial Ministry of Public Works and Infrastructure (formerly the Ministry of Public Works)	Sharing of information around the Project and the positive impact of the Project	To inform them about the Project. To engage with them on energy regulation / reduction, etc. issues (energy reduction, load shedding impact, availability of new energy technologies) of the area. Impact of Project on Stellenbosch operations	As and when the need arises	During specified timeframe of reporting At regular meetings or forums at quarterly intervals Steercom Meetings	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Brochures in local languages Forum meetings Stellenbosch and sector meetings
2.	Stellenbosch Council	To provide views and recommendations To grant approval by means of Council Resolutions	Update on Project performance. Decisions to be made/ approved	As and when the need arises	Council meetings As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Board meeting pack Progress Reports

No.	Stakeholder Group	Focus	Message/ Purpose	Frequency	Timeframe/ Date	Responsibility	Mechanism/ Documentation
3.	Government Institutions – National & Provincial Departments	To provide views and recommendations	<p>To inform them about the Project.</p> <p>To source information related to national planning related to population, health, social (consider impact on wine farms, street cafes/ restaurants, tourism for interest in historical buildings), academic (impact on famous Stellenbosch University), socio- economic activities and development in the Stellenbosch area.</p> <p>To engage in order to receive comments and inputs on technical milestones developed in the classification process.</p>	As and when the need arises	Steercom Meetings Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	<p>Meetings</p> <p>Forums</p> <p>Draft reports</p> <p>Media release during the specified timeframe in terms of the number of days of reporting</p> <p>Progress report</p>
4.	Government Institutions / Funding Institutions: WCG	Project funders and partners	To inform them about progress and issues on the Project	Monthly PSC Meetings	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	<p>PSC Meetings</p> <p>Stakeholder engagement meetings</p>

No.	Stakeholder Group	Focus	Message/ Purpose	Frequency	Timeframe/ Date	Responsibility	Mechanism/ Documentation
5.	Local Government: Stellenbosch Local Municipality City of Cape Town	Engagement from a planning perspective Engagement from a lessons-learnt perspective Engagement during feasibility to reach the Project goals and objectives. To ensure a bankable Project	To introduce the Project and gather information related to the Project / energy IPPs To engage them on the proposed options developed in this Project	As and when the need arises	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Meetings (one on one meetings, group sessions, PSC meetings) Newsletters Draft reports Progress reports Forums
6.	Private Sector: Advisors/ Industries: Transaction Advisor NERSA (The National Energy Regulator of South Africa)	To solicit comments and input on industry norms and standards	To source information related to data & methodology in relation to industry activities To engage in order to receive comments and inputs on technical aspects and impacts of the Project	Regularly, as and when the need arises	Monthly/ Quarterly intervals As and when the need arises	Project Officer with the support of the TA Stellenbosch Project team (stakeholder empowerment communication).	Monthly Communique Media release during the 60 days of reporting
7.	Public: Interested And Affected Parties (I & AP) / Other Interest Groups The Media	Sharing of information around the Project and the positive impact of the Project	To inform them about the Project. To engage with them on energy regulation / reduction, etc. issues (energy reduction, load shedding impact, availability	As and when the need arises	During specified timeframe of reporting At regular meetings or forums at	Project Officer with the support of the TA Stellenbosch Project team (stakeholder	Brochures in local languages Forum meetings Stellenbosch and sector meetings

No.	Stakeholder Group	Focus	Message/ Purpose	Frequency	Timeframe/ Date	Responsibility	Mechanism/ Documentation
			of new energy technologies) of the area. Impact of Project on Stellenbosch operations		quarterly intervals Steercom Meetings	empowerment communication).	

6. CAPTURING AND SYNTHESIS OF STAKEHOLDER INFORMATION

Any issues and responses from stakeholders must be updated, consolidated and reported timeously by the Municipality, as supported by the TA, and the Private Party (once appointed). This report will list the written comments from stakeholders (to be received from comment sheets, at meetings, via e-mails etc.) and responses from the Project team members and/ or the Private Party. Details should also be included in Monthly Management Reports, which should also be part of the Private Party monthly reporting responsibility. A repository should also be kept by the Project Secretariat and the Municipality Project Agreement Management team during the Operations Phase of the Project.

7. FEEDBACK TO STAKEHOLDERS

Feedback to stakeholders will be done by means of:

- Direct answers to any questions or requests for additional information through formal written correspondence, e.g., letters and emails.
- Details of the communication mechanism/ documentation is highlighted in the table in section 6 above.
- Feedback meeting(s) may be held to provide the stakeholders of the progress of the Project.

ANNEXURE 1: STAKEHOLDER MEETINGS TEMPLATE

Date of meeting	Meeting Title	Invitees

**ANNEXURE B - LEGAL FRAMEWORK APPLICABLE TO THE
PROJECT**



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23

FEASIBILITY STUDY

Annexure B – Legal Framework Applicable to the Project

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

Version	Description	Date Issued
V0.1	V0.1 First Draft Issued	3 May 2024
V0.2	V.02 Draft v0.2 – Incorporating comments received up to 30 May 24	31 May 2024
V0.3	V0.3 Small amendment to 1.1	14 June 2024
V.F	Final Draft	27 June 2024

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ANNEXURE B - LEGAL FRAMEWORK APPLICABLE TO THE PROJECT

This Annexure B – Legal Framework applicable to the Project forms part of the feasibility study report for the Stellenbosch Municipal Independent Power Producer Procurement Programme and sets out a summary of the applicable legislative framework for the Project. All terms utilised in this Annexure B are defined in the feasibility study report.

1. SUMMARY OF APPLICABLE LEGISLATIVE FRAMEWORK

The key legislative and regulatory instruments regulating the procurement of electricity by municipalities in South Africa are –

- the Constitution of the Republic of South Africa, 1998 (**“the Constitution”**);
- the Electricity Regulation Act 4 of 2006 (**“ERA”**);
- the Local Government: Municipal Systems Act 32 of 2000 (**“Systems Act”**);
- the Local Government: Municipal Finance Management Act 56 of 2003 (**“MFMA”**); and
- the Municipal Fiscal Powers and Functions Act 12 of 2007 (**“MFPFA”**).

We outline the key relevant provisions in each of the above legal instruments, and the regulations and other instruments issued in terms thereof, below, including the Integrated Resource Plan (**“IRP”**), as published from time to time and various Grid Codes.

1.1 THE CONSTITUTION

Under the Constitution, municipalities constitute a sphere of government (local government), and the council of each municipality is an elected deliberative legislative assembly with legislative and executive powers – i.e., the power to make by-laws and impose charges on the local community, including charges upon property within their jurisdiction, amongst others. It exercises "original" and not "delegated" powers under the constitutional scheme (but can be delegated additional powers, in terms of legislation); it is an autonomous sphere of government and exercises its powers and performs its functions subject to the "supremacy of the Constitution and the rule of law".¹

¹ Section 1(c) of the Constitution; section 2 provides that *"law or conduct inconsistent [with the Constitution is invalid]"*. Section 40 of the Constitution provides that the three spheres of government (national, provincial and local) are 'distinctive, interdependent and interrelated'.

The autonomy of municipalities is recognised in section 151(3) of the Constitution, which provides that municipalities have the right to govern based on their "*own initiative*". However, this power is not absolute. It is circumscribed by the Constitution and national legislation, amongst other sources of law. In this regard, a municipality's powers are not self-generating but conferred by law.

The 'foundational objects' of local government are set out in section 152(1) of the Constitution. The range of 'local government matters' is described in section 156(1)(a) of the Constitution, read with Parts B of Schedules 4 and 5. Under ERA, which we discuss in detail below, municipalities are the main distributors of electricity to residential end users and customers.

In addition to the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5, municipalities are assigned further powers and functions by national and provincial legislation. Municipalities also have the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the performance of its functions (section 156(5) of the Constitution).

1.2 ERA

The ERA regulates the electricity supply industry.

Subject to the provisions of the ERA, electricity may only be generated, transmitted, distributed or traded under the authority of a licence granted by the National Energy Regulator of South Africa ("**NERSA**") under the ERA. Section 7 of the ERA provides that, unless exempt from having to hold a licence in terms of Schedule 2 to the ERA, no person may, without a licence issued by NERSA in accordance with the ERA –

operate any generation, transmission or distribution facility;

- *import or export any electricity; or*
- *be involved in the trading of electricity.*

In terms of the ERA –

- *"generation" is defined as "the production of electricity by any means" and "generator" is defined as "a person who generates electricity"; and*
- *"trading" is defined as "the buying or selling of electricity as a commercial activity".*

The obligation to obtain a licence in terms of section 7 of the ERA is subject to the exemptions contained in Schedule 2 to the ERA. In the event that a person is involved in an activity which would otherwise have to be licensed but is covered by the categories set out in Schedule 2 to the ERA, the person will qualify for an exemption and will not be required to obtain a licence in terms of the ERA.

In terms of section 10(2)(g) of ERA, a person applying for a licence to conduct any of the activities listed in section 7 of ERA must include in their application evidence of compliance with any IRP, or provide reasons for any deviation from the IRP, for the approval of the Minister of Mineral Resources and Energy (the “**Minister**”).

The 2019 IRP, provides for an aggregate limit in respect of ‘distributed generation’,² namely that the annual allocation for distributed generation relates to projects of between 1 megawatt (“**MW**”) and 10 MW. Therefore, any generation projects above the 10 MW threshold which do require a licence (i.e., are not exempted by virtue of Schedule 2) and are not provided for elsewhere in the IRP, will require a Ministerial deviation approval in terms of section 10(2)(g) of ERA before they can be licensed by NERSA. More detail on the IRP is set out below.

As stated above, Schedule 2 of ERA provides that certain activities are exempt from the licensing and registration requirements in ERA. These activities are –

- the operation of a generation facility with or without energy storage for the sole purpose of providing standby or back-up electricity in the event of an electricity supply interruption;
- the operation of any generation facility with or without energy storage irrespective of capacity where the facility does not have a point of connection;
- the generation facility is operated to supply electricity to one or more customers and there is no wheeling of that electricity on a transmission or distribution network; and
- the operation of a facility with a capacity of no more than 100 kilowatts which complies with the Distribution Code, the Transmission Grid Code, or any other Code, approved by NERSA.

Schedule 2 also provides for certain activities which are exempt from the licensing requirement, but must still be registered with NERSA. These include –

- the operation of any generation facility with or without energy storage, irrespective of size or capacity, with a point of connection on the transmission or distribution power system, in circumstances where –

² ‘Distributed generation’ is defined in the 2019 IRP as “*small-scale technologies to produce electricity close to the end users of power*”.

- the generation facility is operated to supply electricity to one or more customers by wheeling on a transmission or distribution network; and the generator has entered into a connection agreement with the holder of the transmission or distribution licence in respect of the power system over which the electricity is to be wheeled; or
- the generation facility has a point of connection but does not export nor import any electricity onto or from the transmission or distribution power system; and
- the operation of a distribution facility up to the point of connection that connects the generation facility where there is conveyancing of electricity through the transmission or distribution power system.

Section 27 of ERA outlines the executive duties of municipalities regarding reticulation services. It obligates municipalities to comply with technical and operational requirements established by NERSA, to integrate reticulation services into their development plans, and to prepare relevant plans and budgets. Municipalities are also tasked with ensuring access to basic reticulation services, either free or at minimal cost, while maintaining sustainability through efficient management and adherence to national standards. They must also report regularly to relevant authorities and customers, align their actions with national energy policies, and maintain financial transparency by keeping separate financial statements for their reticulation business.

Section 34 of ERA is headed '*New generation capacity*', and establishes a regulatory regime whereby the Minister, with the concurrence of NERSA, is permitted to make a 'determination' that new generation capacity is required "*to ensure the continued uninterrupted supply of electricity*".

A determination made by the Minister (with NERSA's concurrence) in terms of section 34(1) can specify – (a) how much new generation capacity is needed; (b) the types of energy sources from which electricity must be generated; (c) the permissible buyers; and (d) the procurement process applicable, among other factors. Certain ancillary powers and functions, which may be necessary or incidental to a determination, are vested in the Minister in terms of section 34(2) of ERA.

Section 34(3) confirms that NERSA, in issuing a generation licence, is bound by any determination made by the Minister in respect of new generation capacity. So once NERSA has concurred in a Ministerial determination, NERSA is arguably bound to license the generation facilities which are selected in a procurement process resulting from such a determination.

In terms of Proclamation 121 of 2023, dated 24 May 2023, the President of the Republic of South Africa (the "**President**") transferred the abovementioned powers and functions vested in the Minister in terms of section 34(1) of ERA, to the Minister of Electricity. The President

also transferred the powers and functions set out in section 34(2) of ERA to the Minister of Electricity, but only “to the extent that the powers and functions are necessary or incidental to any purpose set out in section 34(1) ... excluding powers and functions contained in sections 34(2)(a) to (e)”.

Importantly, we highlight that certain amendments to section 34 of ERA have been proposed in the Electricity Regulation Amendment Bill (B23-2023) (“**ERA Bill**”). Section 27 of the ERA Bill which proposes to amend section 34 of ERA is headed ‘Additional electricity, new generation capacity and electricity transmission infrastructure’, and upon enactment will provide that the Minister may, “*in the event of the failure of a market, or in the event of an emergency, or for the purpose of ensuring security of energy supply in the national interest*”, after consultation with NERSA and the Minister of Finance, make a determination –

- *that additional electricity or new generation capacity is needed to ensure the optimal supply of electricity;*
- *that new electricity transmission infrastructure is needed to ensure the optimal supply of electricity; or*
- *determine that electricity thus produced may only be sold to the persons or in the manner set out in such notice.*

The question of whether a section 34 determination is a prerequisite to the establishment of new generation capacity has been a topic of debate. This issue is discussed in further detail in the main body of the feasibility study report.

1.3 ELECTRICITY REGULATIONS ON NEW GENERATION CAPACITY, 2011 (“NEWGEN REGULATIONS”)

The NewGen Regulations were issued to give further effect to section 34 of the ERA. The NewGen Regulations regulate matters pertaining to determinations made by the Minister that “new generation capacity” is required, and the steps, requirements and associated matters to facilitate the establishment thereof.

“*New generation capacity*” is defined in the NewGen Regulations as follows:

“electricity or electricity capacity sold or made available, or generation capacity connected, to the national transmission power system or an interconnected distribution power system, pursuant to a determination in terms of section 34(1) of the Act, which is derived from—

- (a) *new generation facilities;*
- (b) *an expansion of existing generation facilities;*

- (c) *existing generation facilities not previously supplying electricity to the national transmission power system or an interconnected distribution power system;*
- (d) *existing generation facilities through an extension of any existing agreement for the purchase of electricity capacity or electricity for an additional supply period to be defined in the power purchase agreement, or through entering into a new power purchase agreement for a supply period to be defined in terms of such new power purchase agreement; or*
- (e) *demand side reduction measures, including aggregation, management of demand side reduction, or energy efficiency measures”.*

In terms of Regulation 2 of the NewGen Regulations, those Regulations apply to the procurement of new generation capacity (as defined), by organs of state active in the energy sector, including:

- new generation capacity derived from renewable energy sources and co-generation;
- base load, mid-merit load, peak load new generation capacity, and energy storage; and
- cross border projects,

but excluding new generation capacity derived from nuclear power technology.

The NewGen Regulations were amended in 2020 to facilitate the procurement or acquisition of new generation capacity by qualifying municipalities. Regulation 5(3) of the NewGen Regulations provides as follows in regard to municipal new generation capacity projects:

“(3) A municipality, as an organ of state, may apply to the Minister to procure or buy new generation capacity in accordance with the Integrated Resource Plan, and such municipality must:

(a) conduct and submit a feasibility study as contemplated in sub-regulation (2), where it intends to deliver the new generation capacity project through an internal mechanism as contemplated in section 76(a) of the Municipal Systems Act;

(b) submit proof that it has complied with the provisions of section 120 of the Municipal Finance Management Act and the Municipal Public Private Partnership Regulations published by Government Notice No R. 309 in Government Gazette No. 27431 of 1 April 2005, where it intends to deliver the new generation capacity project through an external mechanism as contemplated in section 76(b) of the Municipal Systems Act; and

(c) submit proof that the application is aligned with its Integrated Development Plan.”

The amendments to the NewGen Regulations to facilitate municipal new generation capacity projects were made before Schedule 2 of the ERA was updated to exempt certain generation facilities from the requirement of being licensed.

1.4 REGISTRATION PROCEDURE IN TERMS OF SCHEDULE 2 OF THE ERA

The procedure for registration of the activities which are exempted from the licensing requirements under the ERA but must be registered with NERSA, is set out in the ‘*Registration Procedure in terms of Schedule 2 of the ERA*’, issued by NERSA (Version 2, dated 12 October 2020) (“**Registration Procedure**”).

Section 10 of the Registration Procedure makes provision for the responsibilities of Network Service Providers (“**NSP**”), and states that the NSP shall not unreasonably deny grid connection to an eligible generator, in accordance with section 21(3) of the ERA.

Section 21(3) of the ERA provides as follows:

“A transmission or distribution licensee must, to the extent provided for in the licence, provide non-discriminatory access to the transmission and distribution power systems to third parties.”

The following approvals are required before one applies for registration:

- the company registration certificate/ copy of identity document;
- shareholding structure;
- a consent letter from the licensed NSP with confirmation, among others, that there is network capacity to accommodate the proposed embedded generator and that the generator meets the requirements of the NSP;
- technical feasibility studies and technical models;
- a power Purchase Agreement (“PPA”) between the generator and the consumer, if the generator and the buyer are not owned by the same entity;
- the wheeling agreement with the NSP, if applicable; and
- Environmental Impact Assessment (“EIA”) Record of Decision (“RoD”) from the Department of Water and Environmental Affairs (only applicable to Co-gen, demonstration and Biomass facilities that are above 1 MW).

The application for registration must be made by the owner/ operator of the generation facility, by filling in the Registration Application Form (Annexure B in the registration procedure).

The Registration Application Form has seven sections, namely Section A: Regulatory Classification; Section B: Particulars of the Applicant; Section C: Particulars of the proposed generation facility, Section D: Customer profile, Section E: Investments and economic particulars, Section F: Checklist, Section G: Declaration.

1.5 THE INTEGRATED RESOURCE PLAN (“IRP”)

The IRP is defined in the Electricity Regulation Act as “*a resource plan established by the national sphere of government to give effect to national policy*”. The IRP is thus a national government policy developed by the Minister of Mineral Resources and Energy (after consultation with NERSA, Eskom and other stakeholders), aimed at forecasting long-term electricity demand and detailing how this demand should be met in terms of generating capacity, type, timing and cost.

The IRP is only referred to in two sections of the ERA –

- firstly, in section 4 dealing with the powers and duties of the Regulator, where it is stated that the Regulator must ...*(iv) issue rules designed to implement the national government’s electricity policy framework, the integrated resource plan and this Act;*³ and
- secondly, in section 10(2)(g) of the Act, an important provision in practice which states that any electricity licence application required under the Act, must include *evidence of compliance with any integrated resource plan applicable at that point in time or provide reasons for any deviation for the approval of the Minister.*

The currently operational IRP, the 2019 IRP, includes (at Table 5) –

- *an allocation for “Other (Distributed Generation, CoGen, Biomass, Landfill) of 500 MW per year from 2023 to 2030; and*
- *an allocation for solar PV which differs from year to year but which amounted to 6000 MW uncommitted capacity at the date of publication of the 2019 IRP. That 6000 MW*

³ Rules to give effect to this provision have not to date been made by NERSA.

has since been allocated to Independent Power Producer (“IPP”) procurement programmes, through Ministerial determinations in terms of section 34 of the ERA.⁴

The term ‘distributed generation’ is defined in the 2019 IRP as “*small-scale technologies to produce electricity close to the end users of power*”. The 2019 IRP provides that the annual allocation for distributed generation relates to projects of between 1 MW and 10 MW.

A proposed Integrated Resource Plan, the 2023 draft IRP was published for public comment on 4 January 2024. The deadline for public comments was 23 February 2024. Progress on the 2023 draft IRP will be tracked during the course of the Project so as to monitor whether Ministerial approval in terms of section 10(2)(g) of the ERA will be required for the Project or any component thereof.

Table 2 in the 2023 draft IRP, titled “*Emerging Plan from Horizon One Analysis*”, indicates a substantial amount of “unserved energy” for the period up to 2030 (which is Horizon One), after taking account of current new generation capacity projects.

1.6 THE SYSTEMS ACT

Chapter 8 of the Systems Act deals with municipal services. The Systems Act regulates municipal service delivery, and in so doing defines the term “*municipal service*” as follows:

“a service that a municipality in terms of its powers and functions provides or may provide to or for the benefit of the local community irrespective of whether—

- (a) such a service is provided, or to be provided, by the municipality through an internal mechanism contemplated in section 76 or by engaging an external mechanism contemplated in section 76; and*
- (b) fees, charges or tariffs are levied in respect of such a service or not”.*

A municipal service is thus defined in broad terms to refer to a public function performed in terms of legislation that benefits the local community. The range of services is not exhaustive, however, the defining characteristic of a municipal service in terms of the Systems Act is that

⁴ GN 1015 published in Government Gazette 43734 dated 25 September 2020, and GN 3257 published in Government Gazette 48402 dated 6 April 2023.

it is a service provided *"in terms of its powers and functions for the benefit of the local community"*. Generally, powers exercised pursuant to legislation are public.

Section 76 of the Systems Act sets out the mechanisms through which a municipality may provide municipal services, including the various types of internal and external mechanisms.

Section 76 reads as follows:

"76. Mechanisms for provision of services

A municipality may provide a municipal service in its area or a part of its area through—

- (a) an internal mechanism, which may be—*
 - (i) a department or other administrative unit within its administration;*
 - (ii) any business unit devised by the municipality, provided it operates within the municipality's administration and under the control of the council in accordance with operational and performance criteria determined by the council; or*
 - (iii) any other component of its administration; or*
- (b) an external mechanism by entering into a service delivery agreement with—*
 - (i) a municipal entity;*
 - (ii) another municipality;*
 - (iii) an organ of state, including—*
 - (aa) a water services committee established in terms of the Water Services Act, 1997 (Act No. 108 of 1997);*
 - (bb) a licensed service provider registered or recognised in terms of national legislation; and*
 - (cc) a traditional authority;*
 - (iv) a community based organisation or other non-governmental organisation legally competent to enter into such an agreement; or*
 - (v) any other institution, entity or person legally competent to operate a business activity."*

In sections 77 and 78, the Systems Act goes on to specify the circumstances in which a municipality must review and decide on the appropriate mechanism for provision of municipal services, and the process that must be followed by a municipality when it considers whether to provide a service through an internal mechanism or an external mechanism, and the factors which must be taken into account when making a determination in that regard, amongst other matters. These provisions are only applicable to a Project which involves the provision of “municipal services”.

The generation and sale of electricity to a municipality, on its own, does not entail the provision of a municipal service by the IPP generator. The Municipality may, however, have to take certain steps to upgrade its capacity and infrastructure to accommodate IPP electricity purchases, such as SCADA systems, control rooms, and staffing requirements, all of which are integral to ensuring efficient contract management, network operation and electricity provision to the local community. These arrangements will not impact on the supply of electricity by the Municipality to its customers.

The Project aims to reduce reliance on Eskom, potentially reduce load-shedding and reduce costs or limit cost increases, without fundamentally altering the provision of existing municipal services to the Municipality’s customers. As such, the internal arrangements of the Municipality and potential upgrading of infrastructure or equipment and internal capacity will not in our view meet the criteria outlined in section 77 of the Systems Act, nor fall within the ambit of “municipal services”.

Therefore, the Project does not trigger a requirement for a Section 78 assessment.

1.7 THE MFMA

The MFMA is the statute which regulates the management of the financial affairs of municipalities and municipal entities.

Section 33 of the MFMA establishes conditions that must be fulfilled for municipal contracts which impose financial obligations on the municipality beyond the three-year period covered in the budget for that particular financial year. Section 33 requires, *inter alia*, that –

- the municipal manager must make public the draft contract and invite the local community and other interested parties to make comments in respect of the proposed contract;
- the municipal manager must solicit the views and recommendations of the National Treasury, the relevant provincial treasury and the national department responsible for local government;
- the municipal council must take into account the municipality’s projected financial obligations of the proposed contract and the impact of those financial obligations on

the municipality's future municipal tariffs and revenue, together with any views or recommendations submitted on the proposed contract; and

- the municipal council must adopt a resolution which determines that the municipality will secure a significant capital investment or will derive significant financial economic or financial benefit from the contract, and which authorises the municipal manager to execute and sign the contract on behalf of the municipality.

Part 1 of Chapter 11 of the MFMA, in line with constitutional requirements, provides that municipalities (and municipal entities) must have and implement a Supply Chain Management (“**SCM**”) policy which conforms to a prescribed regulatory framework and complies with the constitutional procurement principles.

These rules do not apply where a municipality or municipal entity procures goods or services from another organ of state, or under a contract secured by another organ of state.

Section 120 of the MFMA provides, in relation to the conditions and process for public private partnerships, that a municipality may only enter into a public-private partnership agreement if the municipality can demonstrate that the agreement will: (a) provide value for money to the municipality; (b) be affordable for the municipality; and (c) transfer appropriate technical, operational and financial risk to the private party.

Prior to concluding a public-private partnership, the municipality must conduct a feasibility study that is in line with the requirements outlined in section 120(4) of the MFMA. After the feasibility study is concluded, the accounting officer of the municipality must submit the study to the municipal council, and make public the particulars of the feasibility study, as well as solicit the views of National Treasury, the national department responsible for local government as well as any other relevant government department.

1.7.1 MUNICIPAL SUPPLY CHAIN MANAGEMENT REGULATIONS (“SCM REGULATIONS”)

The Municipal SCM Regulations, issued in terms of the MFMA, make provision for the use of a range of procurement processes. A competitive bidding process (i.e., advertised and open to the general public) is prescribed for procurement of goods or services above a transaction value of R300 000 (three hundred thousand rand) (VAT included), in the case of a local municipality.

1.7.2 MUNICIPAL PUBLIC-PRIVATE PARTNERSHIP REGULATIONS, 2005 (“MUNICIPAL PPP REGULATIONS”)

The Municipal PPP Regulations, issued in terms of the MFMA, provide further guidance as regards public-private partnerships by municipalities. A public-private partnership is defined in the PPP Regulations as:

“a commercial transaction between a municipality and a private party in terms of which the private party—

- (a) performs a municipal function for or on behalf of a municipality, or acquires the management or use of municipal property for its own commercial purposes, or both performs a municipal function for or on behalf of a municipality and acquires the management or use of municipal property for its own commercial purposes; and*
- (b) assumes substantial financial, technical and operational risks in connection with—*
 - (i) the performance of the municipal function;*
 - (ii) the management or use of the municipal property; or*
 - (iii) both; and*
- (c) receives a benefit from performing the municipal function or from utilising the municipal property or from both, by way of—*
 - (i) consideration to be paid or given by the municipality or a municipal entity under the sole or shared control of the municipality;*
 - (ii) charges or fees to be collected by the private party from users or customers of a service provided to them; or*
 - (iii) a combination of the benefits referred to in subparagraphs (i) and (ii)."*

The term “*municipal function*” is defined in the Municipal PPP Regulations to include both a municipal service, and “*any other activity within the legal competence of a municipality*”.

1.8 THE MFPFA

The MFPFA regulates fiscal powers and functions of municipalities, including the imposition of taxes, levies, and surcharges. In regard to municipal surcharges, the MFPFA authorises

the Minister to prescribe norms and standards for the imposition of surcharges, including maximum surcharges that may be levied, which norms and standards must be adhered to unless the municipality has been exempted therefrom.

If the MIPPPP were to involve the imposition of any municipal surcharges related specifically to the procurement of electricity from IPPs, the Municipality would have to ensure that any such surcharges are consistent with any applicable norms and standards or any exemptions which apply to the Municipality. In terms of section 9(3) of the MFPFA, a municipality must annually as part of its budget preparation process review any municipal surcharges.

1.9 LEGISLATION APPLICABLE TO LAND USE CONSENTS

With regards to subdivision, the Subdivision of Agricultural Land Act 70 of 1970 (“**SALA**”) prohibits the subdivision of agricultural land, the granting of a long lease over a portion of agricultural land, or the sale or advertisement for sale of any portion of agricultural land, unless the Minister of Agriculture, Land Reform and Rural Development has consented in writing. An option for the purchase or sale of a portion of agricultural land falls within the scope of the prohibition contained in section 3(e)(i) of SALA. This was confirmed by the Supreme Court of Appeal in *Four Arrows Investments 68 (Pty) Ltd v Abigail Construction CC*,⁵ where the court held that “*the object of the legislation was not only to prohibit concluded sale agreements, but also preliminary steps which may be a precursor to the conclusion of a prohibited agreement of sale*”.⁶

The Western Cape Land Use Planning Act No. 3 of 2014 (“**Land Use Planning Act**”) is also relevant. Section 36 of the Land Use Planning Act provides that no person may subdivide land without the approval of the municipality, unless the subdivision is exempted (permitted exemptions are land which is subdivided or consolidated arising from the implementation of a court ruling or an expropriation).

An application for subdivision includes the submission of a subdivision plan showing the location of proposed land units, public places, and land needed for public purposes, and the proposed zonings in respect of the proposed land units.⁷

⁵ [2015] ZASCA 121.

⁶ Ibid at para 10.

⁷ Land Use Management Act section 36(3)(b).

If a municipality approves a subdivision, the applicant must submit a general plan or diagram to the Surveyor General for approval, including proof to the satisfaction of the Surveyor General of at least:

- the decision to approve the subdivision;
- the conditions of approval contemplated in subsection (5) and section 40; and
- the approved subdivision plan.

Further, if a municipality approves a subdivision, the applicant must provide for the following in terms of section 36(8):

- the approval by the Surveyor General of the general plan or diagram;
- completion of the installation of engineering services in accordance the Land Use Planning Act and any other applicable legislation;
- proof to the satisfaction of the municipality that all relevant conditions set out in section 40 Land Use Planning Act for the approved subdivision on the general plan or diagram have been met;⁸ and
- registration of the transfer of ownership in terms of the Deeds Registries Act of the land unit shown on the diagram or of at least one new land unit shown on the general plan.

With regards to rezoning, the Land Use Planning Act states in section 30 that “[n]o person may utilise or develop land unless the utilisation or land development is permitted in terms of a zoning scheme or an approval consistent with this Act and applicable bylaws.” The Land Use Planning Act also provides that a competent person who requires a rezoning, departure or consent use in respect of land must apply to the municipality.

The Land Use Planning Act also provides that an application can be made by a competent person to the municipality for the removal, suspension or amendment of restrictive

⁸ Conditions imposed in terms of section 40 may include, but are not limited to conditions relating to agricultural or heritage resource conservation, biodiversity conservation and management, the provision of land needed by other organs of state etc. The full list can be found in section 41, and in Annexure B.

conditions. Section 39 of the Land Use Planning Act sets out which parties the municipality must inform, and what the municipality should consider when approving such an application.

Section 42 provides that when making a land use application to the municipality, an applicant must submit a copy of the relevant extract of the approved general plan or diagram a copy of the title deed, and the consent of the mortgage holder, if any.

In terms of section 53 of the Land Use Planning Act, no person may without approval or exemption develop land that will have a substantial effect on the orderly, coordinated or harmonious development of a region or the Province, the general welfare of the inhabitants of a region or the Province, or agriculture.

The Western Cape Land Use Planning Regulations⁹ provide, in regulation 10, for the categories of land development which require approval, one of which includes:

“proposed land development that utilises an area of five hectares or more of agricultural land that has been cultivated or irrigated during the 10-year period immediately preceding the proposed land development that involves urban development or urban expansion, including residential, resort, business, industrial and community development, utility services or transport uses, but excluding agricultural land uses or land development ordinarily associated with agricultural use such as agricultural storing and packing facilities, agricultural industries or accommodation for bona fide agricultural workers.”

If the land for the project falls into this category, provincial approval for the land development will have to be obtained in terms of section 53 of the Land Use Planning Act.

Sufficient time should be allotted to obtain rezoning, land use, and restrictive condition applications, as there are various procedures for the municipality to follow before final approval is granted which could include (depending on the type of application):

- the publication of notices (section 43);
- the serving of notices (section 44);
- provincial comment for land use applications (section 45); and
- comments from organs of state (section 47).

⁹ 2015, Provincial Gazette No. 7412.

Section 46 provides that maximum time for decision-making may be prescribed by regulation. The Land Use Management Regulations do prescribe a maximum period for the provincial approval of land development. Regulation 21 states that the Head of Department must decide on a land development application¹⁰ within seven months of acknowledging receipt and acceptance of the application.

1.10 NATIONAL TREASURY MFMA CIRCULAR NO. 118 (“CIRCULAR 118”)

Circular 118, issued by the National Treasury, provides advice to municipalities and municipal entities on the procurement of new generation energy capacity within the legal framework provided for in the Constitution, the MFMA, the ERA and other relevant legislation.

Circular 118 does not create new legal rights or obligations or have binding effect. It is in the form of guidance to municipalities.

Circular 118 sets out a number of scenarios for municipal procurement of new generation capacity but makes it clear that “the aforementioned scenarios are not the only scenarios available to municipalities under which new generation capacity may be established or procured”, and that there “may be various permutations of the scenarios or other scenarios which have not been considered.”¹¹

Of particular relevance to the Project is Scenario 2. Scenario 2 accounts for municipal IPP procurement programmes where the IPPs bid for projects that are located on non-municipal sites, and the municipality does not take on any site or development risks. In this scenario, the municipality is the procurer and the off-taker, with projects located within municipal boundaries but not on municipal land.

Circular 118 proposes, in relation to Scenario 2, that if the procurement is for 100 MW and below, it be directed to Schedule 2 of ERA. If the procurement is above 100 MW, it be undertaken in line with section 34 of the ERA and directed to the DMRE. Being undertaken in line with section 34 of the ERA would imply that the procurement should be the subject of a section 34 Ministerial determination, which would also trigger the application of the NewGen Regulations.

¹⁰ “land development” means the erection of buildings or structures on land, or the change in utilisation of land, including township establishment, the subdivision or consolidation of land or any deviation from the land use or utilisation permitted in terms of an applicable zoning scheme.

¹¹ Circular 118 Summary Report page 3.

However, Circular 118 was issued before the January 2023 amendments to Schedule 2, therefore even if the facility exceeded 100 MW it could be “directed to Schedule II”, assuming it is lawful for municipalities to contract for new generation capacity within the parameters of Schedule 2 of the ERA.

1.11 NRS 048-9:2024 CODE OF PRACTICE – LOAD REDUCTION PRACTICES, SYSTEM RESTORATION PRACTICES AND CRITICAL LOAD AND ESSENTIAL LOAD REQUIREMENTS UNDER POWER SYSTEM EMERGENCIES, EDITION 3 (“NRS 048-9”)

The NRS 048-9 is issued in terms of section 4(a)(iv) of the ERA. NRS 048-9 applies to all licensees unless a deviation is approved by NERSA or an appropriately approved committee which can process exemption applications in a reasonable time, and where such deviations still provide the System Operator with the required load reduction for the relevant stage.

NRS 048-9 provides guidance in relation to load reduction practices, system restoration practices and critical load and essential load requirements under power system emergencies. NRS 048-9 applies to all licensees unless a deviation is approved by NERSA or an appropriately approved committee which can process exemption applications in a reasonable time, and where such deviations still provide the System Operator with the required load reduction for the relevant stage.

NRS 048-9 describes “emergency load reduction” as a measure implemented by the System Operator and distribution control rooms in order to prevent a national, regional or local blackout, which involves mandatory measures over-and-above contracted load reduction (demand response), energy conservation schemes, and demand side management measures. Emergency load reduction may take the form of *load shedding* (time-based interruption of supply to customers on a rotational basis), *(normal) notified load curtailment* (load that is curtailed within hours (typically within two (2) hours) of the instruction being issued), *strategic load curtailment* (load that meets the load curtailment requirements but has also been assigned a role in system stability since it meets criteria specified in item 4.5.4), *load limiting* (a limit placed on the current or power consumed by a customer, typically enabled by smart meter technology), or customer *load switching* (remote switching of customer circuits to specific appliances, typically enabled by smart meter technology or ripple control technology).

In terms item 4.1 of NRS 048-9, which provides for the application and principles of NRS 048-9:

“Where alternative load reduction practices are deployed, these shall:

- a) *achieve the equivalent load reduction requirements of the System Operator;*
- and*

- b) *be agreed with the upstream licensee to ensure no risk to system stability; and*
- c) *[be] defensible to any NERSA audit as still complying with the principles in this code of practice."*

Such alternative practices might relate, for example, to the manner in which smart metering and load limiting technologies are applied as these become available and are implemented, or in the manner in which equity between customers is managed.

On the issue of whether a licensee must be load shed by the System Operator or can implement load shedding itself, item 4.1 states that where licensees choose not to operationally implement load reduction themselves:

- such reduction shall be undertaken by the licensee supplying them; and
- they shall remain accountable for all the engagements with their affected customers in the manner set out in NRS 048 – including the communication of load shedding schedules and addressing the requirements of critical and essential loads.

Item 4.1 further states that where municipal licensees are unable to demonstrate the ability to reduce demand by at least 80% of the required amount within 15 (fifteen) minutes on advance notification (provided at least one (1) hour before possible load shedding), switch between load blocks as per the schedule described in 4.5 in under 30 (thirty) minutes, and the ability to restore 80 % of this load in under 30 (thirty) minutes:

- Eskom shall shed the bulk supply points to these municipalities;
- Eskom shall include these municipalities on its schedules going forward; and
- the municipal licensees shall revise their schedules to reflect the relevant shedding times.

In all cases, the required amount of load to be shed shall comply with the requirements of the System Operator, whilst ensuring that the under-frequency system is not materially compromised.

Variations and exemptions from the default requirements under NRS 048-9 are covered in item 4.3. Variations and exemptions approved in terms of item 4.3 of NRS 048 become a license condition when approved by NERSA. According to item 4.3, those variations and exemptions will never override a law or a court judgement that contradicts it. Decisions which change the context in which the NRS 048-9 must be used can lead to a change in the specification, but until NRS 048-9 has been updated, licensees must apply the law as they best understand it in all aspects of their operations.

Item 4.4.9 of NRS 048-9 (Principle 9 – Customers participating in load reduction) provides that *“Customers who participate voluntarily in formal, real-time load reduction products designed to avoid declaration of a system emergency shall be excluded from early stages of load shedding in accordance with the provisions of this code of practice.”*¹²

Item 4.5 of NRS 048-9 deals with load reduction in circumstances of a national supply constraint. The general rule is that the level of reduction required under stages 1 to 4 is defined at each stage as a percentage of national load and is achieved by both load shedding (according to pre-defined schedules) and by reduction required from customers eligible for notified curtailment. Under a system emergency, the System Operator shall declare the applicable stage of load shedding.

With regards to load curtailment, which is defined in NRS 048-9 as load reduction obtained from customers who are able to reduce demand on instruction or through the application of load switching or load limiting,¹³ section 4.5 of NRS 048-9 further provides that customers who are eligible for curtailment shall be required to declare and arrange this with their licensee. The need to have stable schedules does not allow customers to select a curtailment option at the time of any emergency. Only once it has been agreed and the load shedding schedules have been adjusted to accommodate this reduction in load, will they be curtailed instead of being loadshedded.

Item 4.5.1 goes on to state that where a customer has responded to a request for voluntary load reduction shortly before declaration of an emergency, the licensee should endeavour to deduct this from the customer’s contribution to load reduction, taking the reduction and the time over which, it was reduced into account. The level of reduction required under each loadshedding stage is stage is defined in detail in Annex E of NRS 048-9 and is achieved by both load shedding (according to pre-defined schedules) and by reduction required from

¹² A note to the section provides that load reduction achieved under a scheme designed to manage a longer-term energy constraint is not considered as emergency load reduction, as this does not provide the ability to respond to real-time system requirements. Unless otherwise determined in the rules of such a scheme, a customer will still be required to reduce load under a system emergency, in accordance with the requirements of this code of practice.

¹³ **(normal) notified load curtailment:** load that is curtailed within hours (typically within two (2) hour) of the instruction being issued.

strategic load curtailment: load that meets the load curtailment requirements but has also been assigned a role in system stability since it meets criteria specified in 4.5.4. Unless otherwise specified strategic curtailment loads will be considered identical to normal curtailment loads.

customers eligible for load curtailment. Under a system emergency, the System Operator shall declare the applicable stage of load shedding and strategic load curtailment, respectively.

Item 4.5.1 of NRS 048-9 further states that “[t]he responsibility for keeping the national electricity grid stable lies with the NCC [National Control Centre]. Therefore, if the NCC requires additional load reduction utilities may assume this is in the best interest of the grid. The System Operator will undertake to understand, via network studies, the impact and management of the grid under lightly loaded conditions caused by high (above stage 8) stages of load shedding.”

Item 4.5.3.1 of NRS 048-9 states that all customers shall be on the load shedding schedules, with the exception of:

- a) loads that comply with the requirements for load curtailment (see 4.4.2 and 4.4.4);*
- b) certain critical loads (see Table 5 for a complete view on how these loads should be managed) and certain loads with essential load requirements, and only where such exceptions are provided for under conditions set out in this code of practice (see sections 6 and 7).*
- c) some loads that participate in the merit order (see 4.4.6);*
- d) where alternative reduction options have been agreed with the licensee and approved by NERSA (see 4.1); and*
- e) loads where exemptions have been pre-approved by NERSA.*

Where a large customer is able to absorb the total load reduction requirement of a licensee, this may only be pursued if the licensee’s other customers and upstream supplier agree to the arrangement.

Load curtailment is regulated at item 4.5.4 of NRS 048-9, titled ‘Load curtailment’. In terms of that section, a licensee may identify specific customers who, instead of being shed, can provide a pre-defined amount of load to be curtailed within a maximum of two (2) hours on instruction from the licensee. These will typically be larger customers.

Item 4.5.3.2 sets out the eligibility requirements for load curtailment, as follows:

- the customer shall be able to offer at least 10 % of normal load for curtailment under stages 1 and 2, 15 % of normal load under stage 3 and 20 % of normal load under stage 4; at least 30 % of their load in stages 5 and 6, at least 40 % of their load in stages 7 and 8 and at least 50 % of their load in stages 9 and 10 or reduce to pre-notified essential loads;

- If the customer cannot reduce its load in line with the stage declaration, then it must reduce to essential loads, if these have been declared and accepted; this curtailment shall be maintained for the duration of the emergency, or as otherwise instructed by the System Operator through the licensee, as per instructed loadshedding stages, during the system emergency (see NOTE 1); the curtailment shall be effected within an agreed time frame (notification time) based on the nature of the customer installation, but as short as is feasible. The agreed timeframe shall be at least 15 minutes and at most two (2) hours (NOTE 2);
- the curtailment shall not affect the integrity of the national under-frequency load shedding scheme. For customers with under frequency loads on their premises the customer shall indicate which load is curtailed to obtain the required load reduction to confirm that the under-frequency scheme is not compromised. If it is the same load the customer shall supply an alternative load to be allowed to curtail;
- the required load curtailment can be measured and verified;
- the customer will sustain their essential load while curtailing, ensuring that the essential loads are powered by the remaining supply;
- protection of this customer from load shedding shall not result in the need to exclude significant other load from load shedding due to network limitations (i.e., recognising this customer might not be on the same circuit as other customers that are on the load shedding scheme). Where this customer represents over 80% of the load supplied by a specific feeder, curtailment provided by this customer may be considered adequate. Where this criterion is not met, and where the customer can offer the equivalent load for curtailment, curtailment may be considered (Note 4); and
- actual load curtailment instructed during an event complies with the requirements agreed upon with the licensee.

Where such conditions are not met, a customer shall not be eligible to be removed from the load shedding schedules (and may be placed back on the schedule if the actual load curtailment is not achieved during an event).

The base line for determining the percentage reduction shall be in accordance with Annex F, or as otherwise agreed between the customer, the licensee, and the System Operator.

Customers who participate under the notified load curtailment scheme:

- a) shall be excluded from load shedding schedules; and

- b) shall not exceed normal demand profile for 12 (twelve) hours after the emergency.

Customers who can demonstrate the ability to manage the required percentage reduction across several independent installations for a given licensee may be accommodated (e.g., a customer or group of customers may agree to completely close down one plant while other plants remain in operation). This arrangement applies to a national emergency (load reduction requirement) and should not compromise the specific requirements for regional load shedding in the event of a regional load shedding requirement (i.e., local supply constraints). Licensees may agree to manage group curtailment across licensees, where technically and operationally possible.

A licensee may use preferred load curtailment information provided by several independent customers to develop a co-ordinated load curtailment plan. This plan shall demonstrate the ability to manage the required percentage reduction across several customers within a single licensee's area of control (i.e., a customer may choose to completely close down one (1) plant while other customers remain in operation). A licensee cannot guarantee that the notified requirements for load curtailment can be accommodated in such a plan. In cases where combined offerings are required over multiple licensee areas, then this should be handled through the exemption process (refer 1.4).

In the event that a customer does not achieve the load curtailment requirements during an emergency, the licensee shall have the right to shed the customer after reasonable notice has been given.

A customer on self-managed load curtailment must meet the requirements of load curtailment for at least eight out of the ten most recent load curtailment days/ events. Should the customer fail to meet these requirements, the customer shall be placed back onto load shedding schedules.

Customers with essential loads would be instructed to reduce to essential loads for their loadshedding period, remaining at that level for at least the loadshedding period, with reduction and ramping up not being part of the load reduction period. If this is not complied with, load disconnection is necessary. Customers would need to make a new application to the licensee to be considered for load curtailment and indicate the measures taken to prevent future non-compliance.

Methods of reducing the impact of load shedding, as they apply to licensees or private generators, are dealt with in item 4.12 of NRS 048-9, which makes provision for "*Technology applications to reduce impact on customers*". In the introduction to NRS 048-9, it is explained

that the introduction of embedded generation provides a challenge to the development of load shedding schedules, as demand reduction required from a specific feeder may be accompanied by disconnection of the embedded generator. Whilst feeders where such generation provides a net export to the grid may be removed from the schedules, feeders with a net demand are best managed through smart meter interventions rather than load shedding.

Item 4.12.2.1 states that where a licensee or end-use customer has embedded generation, and such generation is not already included in the normal load profile of the licensee or customer, such generation may be used to reduce the load reduction required under emergencies.

According to item 4.12.2.2, such generation may be offered as unscheduled reduction under a system constraint, particularly where the possibility of further stages of load reduction can be avoided. The item further states that where this generation has been considered as part of the load reduction required during subsequent stages, offering such generation voluntarily when called on under a system constraint should not increase the required reduction from individual municipalities or metropolitan municipalities during subsequent stages of load reduction.

However, item 4.12.2.2 also states that customers with internal generation capability, but who are still taking some supply from a licensee, should be required to reduce load according to NRS 048-9, if their generation follows a regular usage pattern, and that the required reduction will depend on the amount of power taken from the licensee. Further, that: *“Customers who have generation that is not normally scheduled should be allowed to generate to reduce their off take by the same amount required for load curtailment per stage, in lieu of load shedding load. If that power is already running when load reduction is called for it cannot be used to offset load reduction directly. If they have an agreement with the single buyer office to generate (e.g., gas turbine peaking plant) this plant cannot be used to off-set load reduction requirements.”*

Wheeling of energy must be taken into consideration when determining the target for customers. If the energy generated remotely is used during normal production, then it is part of the customer's profile and can be used to reduce the customer's load base used to set targets. It cannot be used to directly offset load reduction. If the remote energy is only generated during load reduction periods, then this may be used to offset loadshedding since it would not have been part of the customer's normal baseload.

1.12 DISTRIBUTION NETWORK GRID CODE, VERSION 6.2 (“DISTRIBUTION NETWORK CODE”)

Section 4 of the Distribution Network Code makes provision for the operational responsibilities of embedded generators and other customers, and states that:

- when conditions on the Distribution System, under normal or abnormal conditions, become such that it may jeopardise plant or personnel of customers, customers shall immediately disconnect from the Distribution System;
- the Embedded Generator shall ensure that its generating units are operated within the capabilities defined in the Connection Agreement entered into with the Distributor;
- the Embedded Generator shall reasonably cooperate with the Distributor in executing all the operational activities during an emergency generation condition;
- customers shall assist the Distributors in correcting quality of supply problems caused by the Customer’s equipment connected to the Distribution System;
- customers shall at all times operate their equipment in such a manner to ensure that they comply with the conditions specified in their supply agreement;
- all customers must declare any generating plant except for Embedded Generators that may be paralleled with the Distribution network via switching, and specify the interlocking mechanism to prevent inadvertent parallel operation with the Distributor network; and
- Embedded Generators shall have the required protection to trip in the event of a momentary supply loss causing an island condition to prevent paralleling out of synchronism due to auto-reclose functionality on the Distributor’s network.

1.13 SYSTEM OPERATION CODE VERSION 10.1 (“SO GRID CODE”)

According to the SO Grid Code, the System Operator (currently Eskom, but in the future will be NTCSA) shall “*have ultimate authority and accountability for the operation of the Interconnected power system*” (“**IPS**”).¹⁴ The SO Grid Code defines IPS as consisting of:¹⁵

- the Transmission System (“**TS**”);¹⁶
- assets connected to the TS and belonging to the National Transmission Company (“**NTC**”) (Eskom);
- power stations connected to the TS;
- international interconnectors; and
- the control area for which the System Operator is responsible.

According to section 2.1.1(1) of the SO Grid Code, “[t]he System Operator shall operate the IPS to achieve the highest degree of reliability practicable and appropriate remedial action shall be taken promptly to relieve any abnormal condition that may jeopardise reliable operation. ...”

“Remedial action” is not defined but could include the disconnection of a facility that would jeopardise the functioning of the TS. Furthermore, section 7(1) of the SO Grid Code states that the System Operator shall “sanction the shutting down and synchronising of any units.”¹⁷

1.14 STELLENBOSCH MUNICIPALITY ELECTRICITY SUPPLY BY-LAW 2020

The Stellenbosch Electricity Supply By-Law applies, principally, as between the Municipality and its customers. Therefore, the By-Law will not in general be directly relevant to the Project

¹⁴ Section 2(4) of the SO Grid Code.

¹⁵ According to the definition of TS, the IPS definition is not linked to specific assets, but includes those components of the electrical network that have a measurable influence, at transmission level, on each other as they are operating as one power system.

¹⁶ All lines and substation equipment where the nominal voltage is above 132 kV.

¹⁷ Defined as an alternator and all the related equipment, including the generator transformer, that can be connected to the TS.

– which relates to the arrangements between the Municipality and selected IPPs (who will have no direct relationship with electricity consumers/ customers in the Stellenbosch area).

We have summarised the following sections that may find relevance to the Project.

Chapter 2 of the Stellenbosch Electricity Supply By-Law provides for the general conditions of supply, and states that the Municipality may permit the supply or retail wheeling of electricity through its network by another electricity supplier which is licensed to supply electricity in terms of the ERA, and that such permission shall be governed by a service delivery agreement in term of section 80 of the Municipal Systems Act. (By-Law 2(4)-(5)). It is further provided that the Municipality may permit the co-generation of electricity by its customers subject to—

- a generation agreement being entered into;
- compliance with the relevant requirements of the ERA pertaining to the generation of electricity and the safety thereof;
- registration at the municipality of all fixed installations where electricity is generated; and
- compliance with the municipality's safety and quality requirements prior to allowance of the generation of electricity onto the municipal networks. (By-Law 2(5)(a)-(d)).

Furthermore, By-Law 2(6) states that the surplus generation of electricity may be prohibited, and the municipality may determine conditions for such surplus generation pertaining to timing and quantity.

Stellenbosch Electricity Supply By-Law 3(3) states that *“No person may generate electricity by way of a fixed installation and into a municipal network unless an agreement has been concluded with the municipality, and such agreement together with the provisions of this by-law, as well as any other legislation governing the licensing of generators, shall govern such generation of electricity.”*

With regards to the application for supply or generation, By-Law 6 provides that an application for the supply or generation of electricity must be made in writing by the prospective

customer¹⁸ on a prescribed form obtainable at the office of the municipality, and the estimated load, in kVA, of the installation, must be stated therein. Applicants for the supply or generation of electricity must submit the following documents with their application:

- identity document or passport, and, in the case of a business, a letter of resolution delegating the authority to the applicant.
- a valid lease agreement, in the case of a tenant, or, in the case of an owner, a title deed or other proof of ownership of the premises for which a supply or generation of electricity is required.

Stellenbosch Electricity Supply By-Law 16 provides for the payment of tariffs and tariff principles and states that customers shall be liable for all tariffs listed in the prescribed tariffs in terms of the municipality's Tariff Policy.

Chapter 11 of the By-Law provides for development charges, which are defined as once-off contributions made by customers/ developers towards the capital costs of networks, other than the network directly and exclusively associated with the direct connection to a consumer, installed by the utility to meet the electricity needs of the customer/ developer. In terms of By-Law 63, each Developer or Customer must pay the Development Charges when applying for a new connection to a Development and the premises of a consumer.

Development Charges will be calculated as per the requirements of the approved annual Development Charges Policy of the Municipality and NRS 069: Code of Practice for the Recovery of Capital Costs for Distribution Network Assets.

No formal electricity may be supplied to a development or premises of a consumer unless the Development Charges have been paid.

The Municipal Council may, at its discretion, reduce or delay the payment of the amount of the Development Charges to a specific development or premises, for the purpose of

¹⁸ “**customer**” in relation to premises means:

- (a) any occupier thereof or any other person with whom the municipality has contracted to supply or generate, or is actually supplying or generating electricity thereat; or
- (b) if such premises are not occupied, any person who has a valid existing agreement with the municipality for the supply or generation of electricity to such premises; or
- (c) if there is no such person or occupier, the owner of the premises;

accelerating business development or to low-cost housing developments in order to make such developments more affordable.

By-Law 64 provides that any person may in writing apply to the municipality for exemption from any provision of the by-laws.

1.15 INTERIM GRID CAPACITY ALLOCATION RULES (“IGCAR”)

In July 2023, Eskom published the IGCAR under section 21(4) of the ERA, which aimed to address the challenges associated with the increase in applications for grid connections from IPPs with private PPAs, which had resulted in further grid capacity constraints.

The IGCAR advocates to give effect to the principle of “first ready, first served” in the area of grid capacity allocation, with section 3 setting out the process and requirements for applications for grid capacity allocation. All grid connection applications (request for budget quotation) shall be accompanied by the following documents in support of the application:

- A completed request for a budget quotation in the form prescribed by Eskom;
- Payment of a budget quotation fee as applicable and as determined by Eskom;
- A letter from the NERSA confirming proof of application for registration or a generation licence as applicable for the generation facility;
- In addition to the above, applicants shall submit the following documents required to assess the readiness of the project:
 - Environmental consents and authorisations:
 - Environmental Authorisation (“**EA**”) and Water Use License (“**WUL**”) in respect of the generation facility;
 - Where applicable (for example, for wind farms), a conditional approval issued by the South African Civil Aviation Authority in terms of the Civil Aviation Regulations;
 - Land rights (ownership and lease) to construct the generation facility;
- *PPA Heads of Terms duly signed with the end user of the power or a licensed energy trader and confirmation from the off-taker;*
- Confirmation of appointment of design consultants accepted by Eskom, where grid connection works will be undertaken through the self-build scheme for handover to Eskom on completion; and

- Measured data for the primary energy resource, as applicable (minimum two years for wind and one year for solar).

According to section 3(3) of the IGCAR, any application that is non-compliant with the rules listed above shall, at Eskom's sole discretion, be considered incomplete and "disqualified".

On receipt of a completed application for grid connection (request for budget quotation), Eskom shall assess the readiness of the project and conduct a high-level scan (technical assessment) of available grid capacity and, thereafter, issue a letter of consent to the applicant indicating the following:

- that sufficient grid capacity is available to connect the project and that the application has been placed in the reservation queue pending receipt by Eskom, within 15 (fifteen) business days of the issuing of the Letter of Consent, of the Grid Capacity Allocation Guarantee issued by a financial institution approved by Eskom;
- that there is insufficient capacity to connect the project and that an additional scope of work is required in order to connect the project.

Eskom will either issue a notice of non-compliance with the application requirements or issue a Letter of Consent envisaged within 15 (fifteen) business days of submission of the application for grid connection.

Should the Grid Capacity Allocation Guarantee not be received by Eskom within 15 (fifteen) business days the Letter of Consent will lapse, the application for a budget quotation will be deemed rejected, and Eskom will reallocate the affected grid capacity without further notification to the applicant.

All projects in the reservation queue shall comply with all requirements stipulated in the budget quotation and connection agreements, including application conditions in the Cost Estimate Letter. In the case of grid connection works/ projects developed through a self-build scheme, failure to comply with the following requirements will result in the projects being removed from the reservation queue:

- failure to appoint design consultants within timelines stipulated by Eskom;
- failure to submit preliminary designs to the relevant technical review teams/ committees within timelines of being requested to do so by Eskom; and
- failure to rectify and correct any defects with any submission made to Eskom within 14 (fourteen) working days of being requested to do so.

According to section 10 of the IGCAR, on the issuing of a budget quotation, a project shall be required to fulfil all budget quotation conditions within the acceptance period stipulated in the

budget quotations. Once all budget quotation conditions have been fulfilled, a project shall be moved from the reservation queue to the allocation queue.

According to section 11 of the IGCAR, should a project fail to fulfil the budget quotation conditions within the stipulated acceptance period, the budget quotation will lapse, and the capacity reserved for such a project shall be reallocated by Eskom in accordance with the first-ready, first-served criteria.

According to section 13 of the IGCAR, all projects in the allocation queue should comply with all requirements stipulated in the connection agreements, including the budget quotation. Failure to comply with the following requirements will result in the projects being removed from the allocation queue:

- failure to submit final design packages within the timelines set out in the budget quotation; and/ or
- failure to comply with the budget quotation milestone schedules and/ or the commence and continue provisions stipulated in the connection agreements.

ANNEXURE C - ENVIRONMENTAL CONSENTS



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23

FEASIBILITY STUDY

Annexure C – Environmental Consents

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

	Version	Date Issued
V0.1	V0.1 First Draft Issued	3 May 2024
V.F	Final Draft	27 June 2024

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ANNEXURE C - ENVIRONMENTAL CONSENTS

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ACRONYMS USED IN THIS ANNEXURE C	
AGA Act	Astronomy Geographic Advantage Act 21 of 2007
Amendment Bill	National Water Amendment Bill of GN 4097 in GG 49733 on 17 November 2023
BAR	Basic Assessment Report
BESS	Battery Energy Storage System
CARA	Conservation of Agricultural Resources Act 43 of 1983
CA Regulations	Civil Aviation Regulations, 2011 published in GNR.425 of 1 June 2012
DALRRD	Department of Agriculture, Land Reform and Rural Development
DFFE	Department of Forestry, Fisheries and the Environment
Diversion and Impeding GA	General authorisation for section 21(c) and (i) water uses published in GNR 4167 dated 8 December 2023
Draft WULA Regulations	Revision of the Regulations Regarding the Procedural Requirements for Water Use Licence Applications published on 19 May 2023
DWAF Internal Guideline	Internal guideline documents entitled " <i>Generic Water Use Authorisation Application Process</i> ", published by the erstwhile Department of Water Affairs and Forestry in November 2007
DWS	Department of Water and Sanitation
EA	Environmental authorisation issued in terms of section 24 of NEMA
EAP	Environmental assessment practitioner
ECA	Electronic Communications Act No. 36 of 2005
ELUs	Existing lawful water use in terms of section 34 of the NWA
EIA Regulations	Environmental Impact Assessment Regulations, 2014 published under GNR.982 of 4 December 2014, as amended
Environmental Consents	Any consents, licences, authorisations, permissions or approvals required from any organ of state in the local, provincial or national sphere of government or any regulatory agency in terms of any environmental law or heritage law for the development, construction or operation of a facility
Environmental Themes Regulation	Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of section 24(5)(a) and (h) and 44 of NEMA published under GN 320 in GG 43110 of 20 March 2020
Fines Act	Adjustment of Fines Act 101 of 1991
GA	General authorisation in terms of section 39 of the NWA

General Authorisation (Section 21(a) and (b))	Revised General Authorisation for the Taking and Storing of Water, published under GN 538 in GG 40243 of 2 September 2016
HIA	Heritage Impact Assessment
I&APs	Interested and affected parties
IDA	Infrastructure Development Act No. 23 of 2014
Listing Notice 1	Environmental Impact Assessment Regulations Listing Notice 1 of 2014 Published under GN R983 in GG 38282 of 4 December 2014, as amended
Listing Notice 2	Environmental Impact Assessment Regulations Listing Notice 2 of 2014 Published under GN R984 in GG 38282 of 4 December 2014, as amended
Listing Notice 3	Environmental Impact Assessment Regulations Listing Notice 3 of 2014 Published under GN R985 in GG 38282 of 4 December 2014, as amended
Municipality	Stellenbosch Municipality
MW	Megawatt
NBR&BSA	National Building Regulations and Building Standards Act 103 of 1977
NEMA	National Environmental Management Act 107 of 1998
NEMA Appeal Regulations	National Appeal Regulations, 2014 published under GN R993 in GG 38303 dated 8 December 2014
NEMBA	National Environmental Management: Biodiversity Act No. 10 of 2004
NFA	National Forests Act No. 84 of 1998
NHRA	National Heritage Resources Act No. 25 of 1999
NWA	National Water Act 36 of 1998
Province	Western Cape Province
RE Facility	Development and operation of the Pioneering Project 2: Solar PV projects in Stellenbosch
PV	Photovoltaic
Relevant Period	The period of two years before the commencement date of the NWA, being 1 October 1998.
RAM	DWS Risk Assessment Matrix
REDZ	Renewable Energy Development Zones
SACAA	South African Civil Aviation Authority
SAHRA	South African Heritage Resources Agency
SALT	Southern African Large Telescope
SANDF	South African National Defence Force
SARAO	South African Radio Astronomy Observatory
Schedule 1 Water Uses	Permissible water uses in terms of Schedule 1 of the NWA
S&EIAR	Scoping and Environmental Impact Assessment Report

SAWS	South African Weather Service
SIP	Strategic integrated project contemplated under the IDA
Technical Report	The report required to support the application for a WUL
TOP	Threatened or protected species
WSA	Water Services Act No.108 of 1997
WCG	Western Cape Government
WUL	Water use licence issued in terms of the NWA
WULA Regulations	Water use licence and appeals regulations, 2017 published in GNR. 267 in Government Gazette 40713 dated 24 March 2017

1. KEY ENVIRONMENTAL CONSENTS

1.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT 107 OF 1998

1.1.1 STATUTORY TRIGGER FOR AUTHORISATION:

In terms of NEMA, certain activities that are considered likely to have detrimental impacts on the environment require an EA prior to commencement. Under NEMA, the Minister of the DFFE has published a list of regulated activities that require an EA.

The EIA Regulations¹ contain lists of activities in three listing notices. Depending on the listed activities triggered, either a BAR process or more comprehensive and onerous S&EIAR process would be required. These reports are required to be prepared by the appointed EAP and aim to assess the environmental impact to determine whether or not the proposed activities are sustainable.

The listed activities described in the EIA Regulations Listing Notice 1 and Listing Notice 3 prescribe that a BAR must be conducted prior to receiving an EA. The listed activities described in the EIA Regulations Listing Notice 2 prescribe that a full S&EIAR must be conducted prior to receiving an EA.

The development of the Project may trigger a number of listed activities contained within the EIA Regulations Listing Notice 1, Listing Notice 2 and Listing Notice 3. The potentially applicable listed

¹ Environmental Impact Assessment Regulations, 2014. Published under GNR.982 of 4 December 2014, as amended.

activities include (this list is not exhaustive and would need to be confirmed, in respect of each Project, by an appointed EAP):

Listed Activity	Potential Application
Project	
The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 megawatts or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs- (a) within an urban area; or (b) on existing infrastructure. ²	The RE Facility will make use of solar energy as a renewable source and to the extent that it has an output capacity of more than 20 MW, this listed activity would apply.
The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving- (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies. ³	This activity may be applicable where the development footprint of the RE Facility is located within the area of a watercourse.
The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (a) in the Western Cape (i) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; (ii) Within critical biodiversity areas identified in bioregional plans; (iii) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; (iv) On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space,	Depending on the location of the RE Facility, it may require the clearance of indigenous vegetation within an environmentally sensitive area.

² Activity 1 of Listing Notice 2.

³ Activity 19 of Listing Notice 1.

conservation or had an equivalent zoning; or (v) On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister. ⁴	
Grid Infrastructure	
The development of facilities or infrastructure for the transmission and distribution of electricity- (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more, excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is- (a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometres or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development. ⁵	The RE Facility may require the construction and operation of a switching station, substation and other associated infrastructure, including an overhead powerline to facilitate the connection to the Municipality.
The development of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275 kilovolts or more, outside an urban area or industrial complex excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is- (a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometres or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development. ⁶	The RE Facility may require the construction of grid infrastructure to facilitate the transmission and distribution of electricity generated at the solar facility.
BESS	
The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres. ⁷	The development and operation of the RE Facility may require infrastructure for the storage of dangerous goods, which may include flammable and combustible liquids such as oils, lubricants and solvents that may occur in the battery energy storage system or elsewhere on site. Neither “storage” nor “containers” are defined in Listing Notice 2 of the EIA Regulations, 2014. It is therefore open to interpretation whether a BESS involves the storage of dangerous good in containers. It is likely that the dangerous good

⁴ Activity 12 of Listing Notice 3.

⁵ Activity 11 of Listing Notice 1.

⁶ Activity 19 of Listing Notice 2.

⁷ Activity 14 of Listing Notice 1.

	activity would be triggered if one were to develop a separate facility to store a dangerous good on site (e.g. electrolyte solution in excess of the applicable thresholds) at any point during construction, operation or maintenance of the battery. The DFFE adopts the view that a battery facility (whether operational or not) would not trigger the dangerous goods listed activity. However, this depends on the circumstances and bidders would need to consider whether the proposed battery installation may trigger other listed activities (e.g. vegetation clearance), and should engage with the DFFE and their EAP to confirm whether a specific proposed battery installation does/does not trigger any listed activity.
Roads	
The development of a road wider than 4 metres with a reserve less than 13.5 metres. (a) in the Western Cape in (i) Areas zoned for use as public open space or equivalent zoning; (ii) Areas outside urban areas: (aa) Areas containing indigenous vegetation; (bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or (iii) Inside urban areas: (aa) Areas zoned for conservation use; or (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority	The RE Facility may be located outside urban areas and may require access to main roads.

Should any of the above listed activities be triggered, the RE Facility will require an EA to be held by the operational entity that undertakes the RE Facility. The two distinct procedures of the BAR and S&EIAR which may be followed to obtain an EA are set out below.

1.1.2 TIMEFRAME FOR AUTHORISATION:

The process of application for an EA depends on the type of listed activities that are triggered. As mentioned above, listed activities under Listing Notice 1 and Listing Notice 3 require a BAR, whereas listed activities under Listing Notice 2 require a S&EIAR.

The BAR timeline can be summarised as follows:

- The applicant must submit the BAR and any relevant specialist studies within 90 days of receipt of the application (or 140 days if there are significant changes introduced or significant new

information has been added), which reports and studies have been subjected to 30 days of public participation.⁸

- The DFFE must within 107 days from the date of receipt of the BAR decide to either grant the EA for all or part of the activity applied for or refuse the EA.⁹
- As can be seen from the timeframes above, the legislated timeframe for the issuing of decisions with respect to a BAR, is 197 days.
- If after having submitted the application and after the commenting period on the relevant report, significant changes have to be made or significant new information has to be added to the report, the report must be made available to potential or registered I&APs for an additional commenting period of at least 30 days. The revised report, together with any comments received on the revised report must, however, be submitted within 140 days of the expiry of the original period within which the final report had to be submitted to the DFFE. In these circumstances, the relevant period will then be 247 days from the date of the application to the issuing of the relevant decision.

The S&EIA process timeline can be summarised as follows:

⁸ In terms of section 19 of the EIA Regulations: (1) *Where basic assessment must be applied to an application, the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority— (a) a basic assessment report, inclusive of any specialist reports, an EMP, a closure plan in the case of a closure activity and where the application is a mining application, the plans, report and calculations contemplated in the Financial Provisioning Regulations, which have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority; or (b) a notification in writing that the documents contemplated in subregulation 1 (a) will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the documents which changes or information was not contained in the original documents consulted on during the initial public participation process contemplated in subregulation (1) (a) and that the revised documents will be subjected to another public participation process of at least 30 days.*

⁹ In terms of section 20 of the EIA Regulations: (1) *The competent authority must within 107 days of receipt of the basic assessment report and the documents contemplated in regulation 19 (1) (a), in writing— (a) grant EA in respect of all or part of the activity applied for; or (b) refuse EA.*

- The applicant must submit a S&EIAR and any relevant specialist studies within 44 days of receipt of the application, which reports and studies have been subjected to 30 days of public participation.¹⁰
- The DFFE must within 43 days from the date of receipt of the scoping report decide to either accept the scoping report or refuse EA.¹¹
- If the scoping report is accepted, the applicant must within 106 days (or 156 days if there are significant changes introduced or significant new information has been added) from the date of acceptance of the scoping report submit an environmental impact assessment report, which has been subjected to 30 days of public participation.¹²
- The DFFE must within 107 days from the date of receipt of the S&EIAR decide to either grant the EA for all or part of the activity applied for or refuse the EA.¹³

As can be seen from the above, the legislated timeframe for the issuing of decisions with respect to the S&EIAR is 300 days.

¹⁰ Section 21 of the EIA Regulations states that: *If SEIR must be applied to an application, the applicant must, within 44 days of receipt of the application by the competent authority, submit to the competent authority a scoping report which has been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority.*

¹¹ Section 22 of the EIA Regulations states that: *The competent authority must, within 43 days of receipt of a scoping report— (a) accept the scoping report, with or without conditions, and advise the applicant to proceed or continue with the tasks contemplated in the plan of study for environmental impact assessment; or (b) refuse EA if— (i) the proposed activity is in conflict with a prohibition contained in legislation; or (ii) the scoping report does not substantially comply with Appendix 2 to these Regulations or any applicable protocol or minimum information requirements as identified and gazetted by the minister in a government notice and the applicant is unwilling or unable to ensure compliance with these requirements within the prescribed timeframe.*

¹²Section 23 of the EIA Regulations states that: *(1) The applicant must within 106 days of the acceptance of the scoping report, or, where regulation 21 (2) applies, within 106 days of the date of receipt of the application by the competent authority, submit to the competent authority—(a) an environmental impact assessment report inclusive of any specialist reports, an EMP, a closure plan in the case of a closure activity and where the application is a mining application, the plans, report and calculations contemplated in the Financial Provisioning Regulations, which must have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority; or (b) a notification in writing that the documents contemplated in subregulation 1 (a) will be submitted within 156 days of acceptance of the scoping report by the competent authority or where regulation 21 (2) applies, within 156 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the documents, which changes or information was not contained in the original documents consulted on during the initial public participation process contemplated in subregulation (1) (a), and that the revised documents contemplated in subregulation 1 (a) will be subjected to another public participation process of at least 30 days.*

¹³ Section 24 of the EIA Regulations states that: *(1) The competent authority must within 107 days of receipt of the environmental impact assessment report and the documents contemplated in regulation 23 (1) (a), in writing— (a) grant EA in respect of all or part of the activity applied for; or (b) refuse EA.*

If after having submitted the application and after the commenting period on the relevant report, significant changes have to be made or significant new information has to be added to the report, the report must be made available to the registered I&APs for an additional commenting period of at least 30 days. The revised report, together with any comments received on the revised report must, however, be submitted within 156 days of the expiry of the original period within which the final report had to be submitted to the DFFE. In these circumstances, the relevant period will be 350 days from the date of the application to the issuing of the relevant decision.

The above timeframes have been highlighted as they may give rise to timing considerations to the extent that securing all authorisations is a mandatory pre-condition to eligibility for contract award under the STMIPPPP. It is emphasised that the RE Facility would not be able to lawfully commence, in the absence of any required EA. It is also noted that it is within the discretion of the DFFE as to whether to grant an EA.

1.1.3 APPEAL OF ENVIRONMENTAL AUTHORISATION:

In addition to the timeframes above, a decision to grant an EA in favour of the RE Facility may be subject to an appeal, which has its own appeal timeframes in terms of the NEMA Appeal Regulations.

An appeal may be brought by I&APs whose rights may be curtailed or infringed upon by the establishment of the RE Facility. This possibility should be factored into the timeframes for the development, as an appeal suspends an EA that has been granted by the DFFE. Therefore, if an appeal is brought, it will need to be finalised or settled before the RE Facility can commence.

In this regard, in terms of the NEMA Appeal Regulations, the appeal period is as follows:

- the person appealing against the granting of the EA, referred to as the appellant, must submit the appeal within 20 days of the date of notification of the decision;¹⁴

¹⁴ Section 4 of the NEMA Appeal Regulations states that: *An appellant must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party and any organ of state with interest in the matter within 20 days from: (a) the date that the notification of the decision for an application for an EA or a waste management licence was sent to the registered interested and affected parties by the applicant; or (b) the date that the notification of the decision was sent to the applicant by the competent authority, issuing authority or licensing authority, in the case of decisions other than those referred to in paragraph (a).*

- the party applying for the EA must submit all responding statements within 20 days from the date of receipt of the appeal submission;¹⁵
- the appeal administrator¹⁶ must make a recommendation on the appeal to the Minister or MEC within 30 days of receipt of the responding statement or the appeal administrator may appoint an expert or an appeal panel¹⁷ within 10 days from the date of receipt of the receipt of an instruction from the appeal authority¹⁸ which expert or appeal panel must provide advice to the appeal administrator within 10 days from the receipt of an instruction from the appeal administrator and the appeal administrator must make a recommendation on the appeal to the appeal authority within 10 days of receipt of the advice;¹⁹ and
- the appeal authority must reach a decision on an appeal within 20 days of the recommendation on the appeal by the appeal administrator.²⁰

In summary, if an EA is granted and appealed, the commencement of the RE Facility may be subject to delay by a further 90 days or 3 months until the appeal is resolved.

¹⁵ Section 4 of the NEMA Appeal Regulations states that: *The applicant, the decision-maker, interested and affected parties and organ of state must submit their responding statement, if any, to the appeal authority and the appellant within 20 days from the date of receipt of the appeal submission.*

¹⁶ In terms of the NEMA Appeal Regulations, "appeal administrator" means a holder of an office in the Department or Provincial Department responsible for environmental affairs who administers the appeal on behalf of the appeal authority.

¹⁷ In terms of section 6 of the National Appeal Regulations: (1) *If the appeal authority reasonably believes that expert advice must be sought or that an appeal panel must be appointed, the appeal administrator must source an independent expert or constitute an independent appeal panel, or both, within 10 days from the date of receipt of an instruction from the appeal authority.* (2) *The appeal panel contemplated in subregulation (1) may consist of such number of independent experts and with such expertise as the Appeal Authority may deem necessary under the circumstances;* (3) *The expert or appeal panel must provide advice to the appeal administrator within 10 days from the receipt of an instruction from the appeal administrator.*

¹⁸ In terms of the NEMA Appeal Regulations "appeal authority" is the Minister, the MEC or a person delegated the power to decide on appeals by the Minister or MEC, as the case may be.

¹⁹ In terms of Section 7(2) of the NEMA Appeal Regulations: *The appeal administrator must make a recommendation on the appeal to the appeal authority within 10 days of receipt of the advice referred to in regulation 6(2) of these Regulations, in the event that an independent expert has been sourced or an independent appeal panel has been constituted*

²⁰ In terms of Section 7(3) of the NEMA Appeal Regulations: *The appeal authority must reach a decision on an appeal, and notify the appellant, applicant, and any registered interested and affected party, within 20 days of the recommendation on the appeal by the appeal administrator.*

1.1.4 POTENTIAL RISKS:

Failure to secure an EA exposes the developers of the RE Facility to a fine not exceeding R10 million or imprisonment of up to 10 years in terms of section 49B(1)²¹ of NEMA. Further, if an EA is required to be retrospectively secured, should the Project commence without an EA, an administrative fine of R10 million²² will be required to be paid before an EA is retrospectively granted in terms of section 24G of NEMA.

NEMA requires that regulatory authorities direct that operations undertaken without an EA cease pending receipt of retrospective authorisation in terms of section 24G of NEMA.²³ Should the RE Facility require an EA and not have such an entitlement, the RE Facility may be subject to a cease works directive, which would require operations to cease pending receipt of the required entitlement.

Initiating a project without obtaining an EA carries significant financial ramifications and imposes constraints on the project schedule. Hence, adherence to the provisions of NEMA and the EIA Regulations is imperative to avoid these negative consequences.

1.2 OTHER RELEVANT CONSIDERATIONS:

1.2.1 SPLIT APPROVAL FOR GRID INFRASTRUCTURE:

The High Court of South Africa (Eastern Cape Division) held, on 18 July 2023, that it is irregular and unlawful for an EA for the grid to be considered separately from the EA for the project.²⁴ Regulation 11(3) of the EIA Regulations provides: *“If a proponent or applicant intends undertaking more than one*

²¹ In terms of 49B(1) of NEMA: *A person convicted of an offence in terms of section 49A (1) (a), (b), (bA), (c), (d), (e), (f), (g), (q) or (r) is liable to a fine not exceeding R10 million or imprisonment not exceeding 10 years, or to both such fine and such imprisonment.* In terms of section 49A of NEMA: (1) A person is guilty of an offence if that person- (a) commences with an activity in contravention of section 24F (1); In terms of section 24F(1) Notwithstanding any other Act, no person may- (a) commence an activity listed or specified in terms of section 24 (2) (a) or (b) unless the competent authority or the Minister responsible for mineral resources, as the case may be, has granted an EA for the activity; or

²² In terms of Section 24G(4) of NEMA: *A person contemplated in subsection (1) must pay an administrative fine, which may not exceed R10 million and which must be determined by the competent authority, before the Minister, Minister responsible for mineral resources or MEC concerned may act in terms of subsection (2) (a) or (b).*

²³ In terms of section 24F(1)(aa) of NEMA: the Minister, Minister responsible for mineral resources or MEC concerned, as the case may be- (aa) must direct the applicant to- (A) immediately cease the activity pending a decision on the application submitted in terms of this subsection, except if there are reasonable grounds to believe the cessation will result in serious harm to the environment;

²⁴ *Heinrich Jacobus Badenhorst N. O. and Others vs Minister of Forestry Fisheries and the Environment and Others*, High Court of South Africa (Eastern Cape Division), Bloem J, 18 July 2023.

activity as part of the same development within the area of jurisdiction of a competent authority, a single application must be submitted for such development and the assessment of impacts, including cumulative impacts, where applicable, and consideration of the application, undertaken in terms of these Regulations, will include an assessment of all such activities forming part of the development.”

The High Court held that a single application is required in terms of Regulation 11(3) of the EIA Regulations.²⁵ This judgment may be subject to appeal in due course, but it is noted as it may create precedent for a successful appeal and High Court review, should any I&AP want to challenge the lawfulness of any EA that is separately granted for the RE Facility and the Grid Infrastructure.

1.2.2 LANDOWNER CONSENT:

In terms of Regulation 39(1) of the EIA Regulations, an applicant for an EA must obtain the written consent of the landowner or person in control of the land to undertake an activity or project on that land before applying for an EA. It should be noted that the landowner consent is capable of being revoked in the absence of a contractual agreement between the EA applicant and landowner as the EIA Regulations do not expressly provide that such consent is irrevocable. It should further be noted that landowner consent is not required for SIPs contemplated in the IDA.²⁶

1.2.3 DECOMMISSIONING AND CLOSURE:

The EIA Regulations define “closure” to mean *“to take out active service permanently or to dismantle partly, or wholly, or permanently shut down a facility to the extent that it cannot be recommissioned”*. Should a bidder be required to account for the decommissioning and closure of the RE Facility, the EA authorising the RE Facility will need to include the listed activity for the closure²⁷ of existing facilities,

²⁵ *Heinrich Jacobus Badenhorst N.O. and Others vs Minister of Forestry Fisheries and the Environment and Others*, High Court of South Africa (Eastern Cape Division), Bloem J, 18 July 2023.

²⁶ Regulation 39(2)(c) of the EIA Regulations.

²⁷ Activity 31 of Listing Notice 1 of the EIA Regulation as amended by GN 517 of 11 June 2021.

structures or infrastructure.²⁸ In addition, section 24P of NEMA provides for financial provisioning to be set aside for the rehabilitation, decommissioning and closure of an activity or project. The bidder may be required to make financial provision for the costs of decommissioning of the RE Facility and rehabilitation and closure of the RE Facility site and the post-closure monitoring of environment impacts in respect of the RE Facility. The financial provisioning may take the form of a financial guarantee or rehabilitation trust, which should be in place at commercial close. Further, for the entire project lifecycle, the developer will need to comply with the statutory duty of care under section 28²⁹ of NEMA and the “cradle-to-grave” principle, which refers to the responsibility a person takes for the entire lifecycle of a product, i.e. from design to disposal, particularly in respect of the PV panels and other components comprising the RE Facility.

EA Exemptions: It should be noted that the DFFE has published various notices identifying instances of exemption from having to secure an EA in respect of solar PV and wind projects, some of which have been published for comment only (see Schedule 1 attached as Appendix 1 to this Annexure C of the feasibility study report). It would need to be determined whether any exemption is applicable to the RE Facility.

REDZ: Although the Municipality does not fall directly within any REDZ, it is located relatively near the Overberg REDZ (Phase 1). Should wheeling be preferred as an option, the location of a bidding project and grid infrastructure within a REDZ may give rise to the truncated regulatory process and approval timeframes as set out in the IDA.³⁰

²⁸ Activity 31 of Listing Notice 1 requires an EA for “*The closure of existing facilities, structures or infrastructure for- (i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014 (ii) any expansion and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014 (iii) development or expansion in Listing Notice 3 of 2014 (iv) any phased activity or activities for development and related operation activity or expansion or related operation activities listed in this Notice or Listing Notice 3 of 2014; or (v) any activity regardless the time the activity was commenced with, where such activity: (a) similarly listed to an activity in (i) or (ii) above; and (b) is still in operation or development is in progress; excluding where the closure is covered by part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) as decommissioning, in which case the National Environmental Management: Waste Act, 2008 applies; or such closure forms part of a mining application, in which case the requirements of the Financial Provisioning Regulations apply*”.

²⁹ The statutory duty of care, as provided for in section 28 of NEMA, is imposed upon every person who has or who may cause significant environmental pollution or degradation, to take reasonable measures to prevent, minimise and/or manage environmental pollution and degradation in order to ensure the protection of the environment.

³⁰ Schedule 2 of the IDA provides for truncated environmental permitting process and approval timeframes of projects designated as SIPs (truncated to 57 days).

1.3 NATIONAL WATER ACT 36 OF 1998

1.3.1 STATUTORY TRIGGER FOR AUTHORISATION:

Section 21 of the NWA identifies eleven water uses that are regulated in terms of the NWA. In terms of section 22(1)(b) of the NWA, a person may only undertake these water uses with a licence issued in terms of the NWA (i.e. a WUL) or by another lawful means as provided for in the NWA. These other types of lawful water use entitlements include: (i) Schedule 1 Water Uses; (ii) water uses as a continuation of an ELU; or (iii) water uses in terms of a GA published under section 39 of the NWA. If either of a Schedule 1 Water Use, ELU or GA exists, then a WUL will not be required as the lawful water use entitlement will be these other lawful means of undertaking water uses as provided for in the NWA.

For the purposes of the RE Facility, we are able to exclude considering Schedule 1 Water Uses as these types of water uses are low volume, low impact water uses that typically apply to domestic water uses and are not applicable to industrial water uses such as the water uses associated with the RE Facility. We are also able to exclude considering ELUs as these are historic water uses as defined in section 32 of the NWA.³¹

That leaves the alternative water use entitlement of a GA that is capable of being relied upon as a water use entitlement for the RE Facility, which does not require a WUL. The relevant thresholds that apply so as to be able to fall within the ambit of such a water use entitlement are gazetted in terms of the NWA.

Section 21 of the NWA provides for the following water uses:

- Section 21(a): Taking water from a water resource;³²

³¹ In order to qualify as an ELU, the following two enquiries are relevant (i) Validation: The water use needs to have taken place at any time during the Relevant Period and (ii) Verification: That water use would have to have been authorised by or under any law which was in force immediately before the date of commencement of the NWA. It is not permissible to use an ELU that was historically relied upon for agricultural use for industrial use for the RE Facility. As a result, no ELU would be capable of being validly relied upon for new water uses relating to the RE Facility and the application of potential ELUs can be discounted from the enquiry.

³² "Water resource" is defined to include a watercourse, surface water, estuary, or aquifer. "Watercourse" is defined to mean (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.

- Section 21(b): Storing water;
- Section 21(c): Impeding or diverting the flow of water in a watercourse;
- Section 21(d): Engaging in a stream flow reduction activity contemplated in section 36;
- Section 21(e): Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);³³
- Section 21(f): Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
- Section 21(g): Disposing of waste in a manner which may detrimentally impact on a water resource;
- Section 21(h): Disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
- Section 21(i): Altering the bed, banks, course or characteristics of a watercourse;
- Section 21(j): Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
- Section 21(k): Using water for recreational purposes.

The section 21 (d), (j) and (k) water uses are not relevant as they relate to water uses typically associated with afforestation for commercial purposes, mining operations and recreational use, respectively. Further, section 21(h) water uses are not triggered by the development of the RE Facility as there is no disposal of heated water from a power generation process.

The following water uses typically require assessment and are potentially applicable to RE Facilities (this list is not exhaustive and would need to be confirmed by an appointed technical water specialist):

Section 21(a): Taking water from a water resource: The WULA Regulations contemplate this water use to be in respect of the pumping of water (i.e. abstraction) from a dam or river, or from

³³ Section 37(1) contemplates the following controlled activities: (a) irrigation of any land with waste or water containing waste generated through any industrial activity or by a waterwork; (b) an activity aimed at the modification of atmospheric precipitation; (c) a power generation activity which alters the flow regime of a water resource; (d) intentional recharging of an aquifer with any waste or water containing waste; and (e) an activity which has been declared as such under section 38.

a borehole. In terms of the DWAF Internal Guidelines, abstracting water from an off-channel dam having no catchment (for example a balancing dam), a canal, or a pipeline is not taking of water from a resource. The General Authorisation (Section 21(a) and (b)) further contemplates the abstraction of water from a surface water resource or a groundwater resource. If a RE Facility is solely reliant on water supply from the Municipality and will not be abstracting water from a water resource there will be no section 21(a) water use trigger. However, if water is to be taken from a water resource, a WUL would be required if the volumes exceed the volumes stipulated in the General Authorisation (Section 21(a) and (b)).

Section 21(b): Storing water: "Storage" is not defined in the NWA, but is defined in the General Authorisation (Section 21(a) and (b)) to mean "store water not containing waste" and the General Authorisation (Section 21(a) and (b)) provides further that water stored in terms of the General Authorisation (Section 21(a) and (b)) may only be stored off-channel. The gazetted thresholds that are permitted as a GA are set out in the General Authorisation (Section 21(a) and (b)). The DWAF Internal Guideline states that the storing of water contemplated by section 21(b) of the NWA is commonly from natural runoff or river water. The storage of water in containers as opposed to off-channel dams do not give rise to a section 21(b) water use trigger. Even if they did, developers are typically able to ensure that any water that may be stored on site in containers will be kept below the gazetted GA storage thresholds. If this is the case, a WUL will not be required in respect of section 21(b) of the NWA.

Section 21(c): Impeding or diverting the flow of water in a watercourse and Section 21(i): Altering the bed, banks, course or characteristics of a watercourse: In terms of the Diversion and Impeding GA, it is permissible to undertake section 21(c) and (i) water uses without a WUL and without being subject to the requirement to undertake a risk matrix assessment for the construction of a renewable energy facility and associated infrastructure, provided that this will not result in any direct impact/destruction on any watercourses and where the sewerage infrastructure is located more than 100m from any watercourse. Where there will be any direct impacts/destruction of any watercourses, the entire project must be subjected to a comprehensive risk matrix assessment. If the above exclusion is to be relied upon, the RE Facility and Grid Infrastructure are still required to comply with condition 4 to 12 of section 7 of the Diversion and Impeding GA. This includes for example that a water use registration is required prior to any activities within a regulated area of a watercourse. If, from a technical point of view, there is likely to be an impeding and diverting trigger giving rise to a section 21(c) and (i) water use, a risk assessment is required. If the risk is a high or medium risk a WUL will be required. If the risk is low, then registration as a GA is required, which is a far simpler and time efficient process. This risk assessment must be undertaken in terms of the Diversion and Impeding GA by a suitably qualified natural scientist that is professionally registered with the South Africa Council for Natural Scientific Professions and the DWS RAM must be used.

Section 21(e) Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1): As regards section 21(e) water uses, the only potentially applicable controlled activity under section 37(1) is a power generation activity which alters the flow regime of a water resource. This type of water use is typically triggered in the context of a coal fire powered facility that requires significant volumes of water that may give rise to a change in flow regime of a water resource, and would not typically be considered applicable for renewable energy projects.

Section 21(f): Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit: As regards section 21(f) water uses, provided no waste or wastewater is contemplated to be discharged through a pipe, canal, sewer, sea outfall or other conduit into a water resource, this water use would not be triggered. This water use would not typically be considered applicable for renewable energy projects.

Section 21(g): Disposing of waste in a manner which may detrimentally impact on a water resource: As regards section 21(g) water uses, the use of conservancy tanks typically gives rise to the need to have this water use authorised as either a GA or in terms of a WUL due to the potential for waste disposal to occur which may negatively impact on a water resource.

1.3.2 TIMEFRAME FOR AUTHORISATION:

The WULA Regulations provide statutory timeframes for various stages of the application and identify the forms and reports that are required to be included in the application. To process any WULA, there are generally six steps to follow:

- Step 1 – Pre-Application process: This phase begins as soon as you receive your licence application which is used to check what is needed in order to process the licence application. The DW758 (Company Registration Form) form must be completed with the relevant business information in order to complete the process along with the water uses applied for, details of the property owner and the property details of where the water use will take place.
- Step 2 – Application Initiation: The DWS identifies the necessary information required in order to compile a technical report which supports the application that is based on their site inspection or the information on the application form.
- Step 3 – Screening: This phase involves the review of the technical report and the acceptance or rejection thereof.
- Step 4 – Processing and Finalising: This step consists of the evaluation of the technical report where the information is assessed internally at the DWS.

- Step 5 – Decision by the Delegated Authority: The Delegated Authority will determine the approval or refusal of the application after the consideration of all relevant information.
- Step 6 – Implementation: The regional office will begin implementing the licence together with issuing and highlighting the conditions attached to the WUL.

The statutory timeframe for the above mentioned process is up to 300 days which includes a public participation process. Regulation 3(6) of the WULA Regulations provide that a WUL application is to be processed within 300 days.³⁴ On 19 May 2023, the Draft WULA Regulations were published and seek to reduce this timeframe to 90 days. However, the Draft WULA Regulations are not yet operational.

The above timeframes have been highlighted as they may give rise to timing considerations to the extent that securing all authorisations is a condition precedent to any related transactions with the Municipality. It is emphasised that the RE Facility would not be able to lawfully commence in the absence of any required WUL. It is also noted that it is within the discretion of the DWS as to whether to grant an WUL.

1.3.3 APPEAL OF WATER USE ENTITLEMENT

Section 148(1) of the NWA provides for the submission of appeals to the Water Tribunal, including an appeal against a WUL application decision. In terms of Water Tribunal Rules,³⁵ an appellant or applicant must submit the original notice of appeal (in the prescribed form) to the Water Tribunal, with copies to the relevant responsible authority and other I&APs.³⁶ An appeal must be commenced within 30 days after: (a) publication of the decision in the Gazette; (b) notice of the decision is sent to the appellant; or (c) reasons for the decision are given, whichever occurs last.³⁷ The Tribunal officer must serve notice of the sitting on the appellant and I&APs at least 21 days before. Appeals take the form of a rehearing during which the Tribunal: (a) may receive written and/or oral evidence; and (b) must give the appellant and every party opposing the appeal or application an opportunity to present their case and to question

³⁴ In terms of Regulation 3(6) of the Regulations Regarding the Procedural Requirements for Water Use Licence Applications and Appeals: *The process of water use licence application, consideration and decision shall be undertaken within a period of 300 days of submitting such application.*

³⁵ GoN 926, G. 28060 (c.i.o 23 September 2005).

³⁶ Rule 3 of the Water Tribunal Rules.

³⁷ Rule 4 of the Water Tribunal Rules.

any person who testified.³⁸ The decision of the Water Tribunal must be in writing and, at the request of any party and within a reasonable time, the Water Tribunal must give written reasons for its decision.³⁹

In the alternative, the WULA Regulations provide that an applicant or a person who objected to an application and who is aggrieved by a decision of the responsible authority on a WUL application may lodge an appeal directly to the Minister, notwithstanding section 148. In this regard, such a person must submit a notice of intention to appeal to the Minister, within 30 days of becoming aware of the decision or of being provided with reasons for the decision. The Minister must after receipt of appropriate information make and communicate a decision within 90 days of receiving the appeal. These timeframes should be kept in mind and will result in delays if an appeal is submitted against any decision to grant a WUL.

1.3.4 POTENTIAL RISKS

Section 151 lists the offences in terms of the NWA and includes the offence of using water otherwise than as permitted under the NWA and failure to register an existing lawful water use when required by a responsible authority to do so.⁴⁰

Failure to secure the required water use authorisation will result in liability. Currently, section 151(2) of the NWA provides that it is an offence to unlawfully undertake a water use and convicted parties would be subject to a fine not exceeding R120,000 in a District Court, and R600,000 in a Regional Court.

The DWS published the Amendment Bill that seeks to alter this position by introducing a penalty of up to R10 million in fines or a maximum imprisonment term of 10 years, or both.⁴¹

Further, should the RE Facility require a water use entitlement and not have such an entitlement, the RE Facility may be subject to a cease works directive, which would require operations to cease pending receipt of the required entitlement.

³⁸ Rule 7 of the Water Tribunal Rules.

³⁹ Rule 15 of the Water Tribunal Rules.

⁴⁰ In terms of section 151 of the NWA: *No person may – (a) use water otherwise than as permitted under this Act.*

⁴¹ In terms of section 28 of the National Water Amendment Bill: Section 151 of the principal Act is hereby amended- (a) by the substitution for subsection (2) of the following subsection "(2) A person convicted of an offence in terms of subsection (1) (a), (c), (d), (e), (h), (i) or (j) is liable to a fine not exceeding R 10 million or to imprisonment for a period not exceeding 10 years, or to both such fine or such imprisonment."

1.3.5 OTHER RELEVANT CONSIDERATIONS

Transformation of the Water Sector: At present, in terms of the NWA, the applicant for a new WUL is required to put forward a motivation for a WUL, in terms of the NWA Regulations, which is required to cover eleven different considerations as set out in terms of section 27 of the NWA as to why a WUL should be granted.

In this regard, section 27(1)(b) of the NWA provides that in issuing a GA or WUL, a responsible authority must take into account all relevant factors, including the need to redress the results of past racial and gender discrimination.ⁱ

However, regulation 12(1) of the Draft WULA Regulations provides that the responsible authority shall give preference to applications from black people, followed by women. Regulation 12(2) provides that all applications for taking and storing water that are submitted to the DWS are expected to satisfactorily address section 27(1)(b) of the NWA.⁴² This should be kept in mind to the extent that taking of water for the RE Facility triggers the need to secure a WUL.

1.4 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT NO. 10 OF 2004

1.4.1 STATUTORY TRIGGER FOR AUTHORISATION:

NEMBA provides for the management and conservation of South Africa's biodiversity within the framework of the NEMA. It further makes provision for the protection of species and ecosystems that warrant national protection and the sustainable use of indigenous biological resources.

⁴² Specifically, the enterprise in respect of the application must allocate shares to black people in the following proportions:

- Taking and storage of water of up to 250 000m³ are exempted from shares being required to be allocated to blacks.
- Taking and storage of water between 250 000m³ to 500 000m³ require 25% of the shares of the holder to be allocated to blacks.
- Taking and storage of water between 500 000m³ to 1 000 000m³ require 50% of the shares of the holder to be allocated to blacks.
- Taking and storage of water of more than 1 000 000m³ require 75% of the shares of the holder to be allocated to blacks.

Chapter 7 of NEMBA regulates biodiversity related permits. Section 87 of NEMBA prohibits the carrying out of a “restricted activity”⁴³ involving specimens of listed threatened or protected species; alien species; or listed invasive species without a permit issued in terms of chapter 7.

Chapter 4 of NEMBA deals with TOP plant and animal species and ecosystems and allows the Minister to publish lists of TOP species⁴⁴ which must be reviewed at least every five years⁴⁵ and lists of restricted

⁴³ (a) in relation to a specimen of a listed threatened or protected species,—

(i) hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means, method or device whatsoever, including searching, pursuing, driving, lying in wait, luring, alluring, discharging a missile or injuring with intent to hunt, catch, capture or kill any such specimen;

(ii) gathering, collecting or plucking any specimen of a listed threatened or protected species;

(iii) picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species;

(iv) importing into the Republic, including introducing from the sea, any specimen of a listed threatened or protected species;

(v) exporting from the Republic, including re-exporting from the Republic, any specimen of a listed threatened or protected species;

(vi) having in possession or exercising physical control over any specimen of a listed threatened or protected species;

(vii) growing, breeding or in any other way propagating any specimen of a listed threatened or protected species, or causing it to multiply;

(viii) conveying, moving or otherwise translocating any specimen of a listed threatened or protected species;

(ix) selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of a listed threatened or protected species; or

(x) any other prescribed activity which involves a specimen of a listed threatened or protected species; and

(b) in relation to a specimen of an alien species or listed invasive species, means-

(i) importing into the Republic, including introducing from the sea, any specimen of an alien or listed invasive species;

(ii) having in possession or exercising physical control over any specimen of an alien or listed invasive species;

(iii) growing, breeding or in any other way propagating any specimen of an alien or listed invasive species, or causing it to multiply;

(iv) conveying, moving or otherwise translocating any specimen of an alien or listed invasive species;

(v) selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of an alien or listed invasive species; or

(vi) any other prescribed activity which involves a specimen of an alien or listed invasive species.

⁴⁴ Section 56(1) NEMBA.

⁴⁵ Section 56(2).

activities in connection with those species.⁴⁶ A permit is required for carrying out of restricted activities involving listed species.⁴⁷

In 2007, the Minister published lists of TOP species⁴⁸ and made regulations prescribing the permitting process.⁴⁹ The permitting authority may require an ecological risk assessment to be undertaken by the applicant before deciding an application which must be carried out by a suitably qualified person.⁵⁰ In order to prevent delays in the authorisation process for the RE Facility, the risk assessment could be undertaken as part of the biodiversity impact assessment that is often required as part of the NEMA EIA process.

The restricted activities relating to TOP species include killing, picking, uprooting, damaging or destroying, having in possession, growing breeding, moving or translocating specimens of TOPs.⁵¹

NEMBA also potentially restricts activities in connection with alien or listed invasive species of plants and animals.⁵² The restricted activities include growing, breeding or in any other way propagating any specimen of an alien or listed invasive species, or causing it to multiply.⁵³

These activities may not be carried out unless a permit is first obtained. The development of the RE Facility may involve the disturbance or destruction of, or damage to, listed protected species of flora or fauna or activities involving listed alien or invasive species.

1.4.2 TIMEFRAME FOR AUTHORISATION:

The Minister of the DFFE is empowered to issue regulations specifying the timeframes for the consideration and issuance of a permit or registration by an issuing authority. However, these regulations have not been promulgated.

⁴⁶ Section 57.

⁴⁷ Section 57(1).

⁴⁸ NEMBA: Lists of critically endangered, endangered, vulnerable and protected species, GN R151 in Government Gazette 29657 of 23 February 2006.

⁴⁹ NEMBA: Threatened Or Protected Species Regulations, GN R152 in *Government Gazette* 29657 of 23 February 2006, as amended.

⁵⁰ Section 89 of NEMBA.

⁵¹ Section 1, definition of restricted activity.

⁵² Section 65 of NEMBA.

⁵³ Section 1, definition of restricted activity.

An estimated timeframe for the application process in terms of the Alien and Invasive Species Regulations may take up to 60 working days or more subject to the inclusion and submission of all the information required.⁵⁴

The estimated timeframe in terms of the TOPS Regulation, is 20 working days from the date upon which the issuing authority receives the application,⁵⁵ however, this may vary.

1.4.3 APPEAL OF BIODIVERSITY AUTHORISATION:

NEMBA does not provide for an appeal procedure against the granting of a biodiversity permit. Consequently, an I&AP whose rights have been impacted, that intends to appeal against the granting of a biodiversity permit, must be done in terms of the framework legislation, NEMA. The appeal process in terms of NEMA is described at paragraphs 1.1.3 above.

1.4.4 POTENTIAL RISKS:

Section 101 lists the offences in terms of the NEMBA and includes the offence of carrying out a restricted activity involving a specimen of an alien species without a permit,⁵⁶ carrying out a restricted activity involving a specimen of a listed invasive species without a permit,⁵⁷ and carrying out a restricted activity involving a specimen of a listed threatened or protected species without a permit.

Failure to secure the relevant permit in terms of NEMBA will result in liability to a fine not exceeding R10 million, or an imprisonment for a period not exceeding 10 years, or to both such a fine and such imprisonment.⁵⁸

Where the offence involves a specimen of a listed threatened or protected species, or an alien species, the fine may be determined, either as above or be equal to three times the commercial value of the specimen or activity in respect of which the offence was committed, whichever is the greater.⁵⁹ Where

⁵⁴ https://www.dffe.gov.za/sites/default/files/docs/forms/permitapplication_invasivespeciesregulations.pdf.

⁵⁵ <https://www.dffe.gov.za/tops-permit-and-registration-application-process-carrying-out-restricted-activities-terms-nemba-10>.

⁵⁶ Section 65(1) NEMBA.

⁵⁷ Section 71(1) NEMBA.

⁵⁸ Section 102(1) NEMBA.

⁵⁹ Section 102(2).

the offence involves a specimen of a listed invasive species, the fine may be determined, either as above or equal to the estimated cost associated with the control of the specimen in respect of which the offence was committed or both.⁶⁰ Despite the above, a magistrate's court has the discretion to impose any penalty prescribed by NEMBA.⁶¹

To avoid the preferred bidder being subject to the fines and disruptions associated with failing to secure the above-mentioned permits, the Municipality should ensure that all required biodiversity permits that are required in terms of NEMBA and provincial Acts and Ordinances are secured prior to development.

1.5 NATIONAL FOREST ACT NO. 84 OF 1998

1.5.1 STATUTORY TRIGGER FOR AUTHORISATION:

Trees in natural forests, protected areas and State forests are protected under the NFA. The Minister of the DFFE may declare individual trees, groups of trees, woodlands, forests or species of trees as protected,⁶² a protected area,⁶³ a group of indigenous trees to be a natural forest,⁶⁴ and a State Forest⁶⁵ which is reserved for forestry.

In relation to protected trees,⁶⁶ no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of the protected tree or any product derived from the protected tree without a licence⁶⁷ or an exemption from the requirement to obtain a licence.⁶⁸

⁶⁰ Section 102(2A).

⁶¹ Section 102(3).

⁶² Section 12(1) of the NFA.

⁶³ Section 8(1).

⁶⁴ Section 7(2) of the NFA.

⁶⁵ Section 2 of the NFA State forest means: State land, other than trust forests, acquired or reserved for forestry in terms of the NFA or any previous forest legislation, unless it has been released under section 50(3); State land, other than trust forests, designated as demarcated State forest or a similar designation in terms of any previous forest legislation, unless it was withdrawn from demarcation and is no longer used for forestry.

⁶⁶ Section 2 of the NFA "protected tree" means a tree declared to be protected, or belonging to a group of trees, woodland or species declared to be protected, under section 12(1) or 14(2);

⁶⁷ Issued in terms of section 7(4) or section 23.

⁶⁸ Section 15 of the NFA.

Additionally, no person may cut, disturb, damage or destroy any forest produce in, or remove or receive any forest produce from, a protected area⁶⁹ except in terms of a licence⁷⁰ or an exemption.⁷¹

Part 1 of the NFA prohibits the destruction of indigenous trees in any natural forest⁷² without a licence⁷³ or an exemption granted in terms of regulations issued under the NFA.⁷⁴

Lastly, no person may engage in any activity⁷⁵ in a State forest without a licence⁷⁶ unless duly exempted.⁷⁷ These activities damaging, cutting or removing timber and other forest produce, the use or construction of roads, buildings or structures, the movement of electricity or any other thing across a state forest or any other use consistent with the sustainable management of the forest.

The development of the RE Facility and associated clearance and removal of vegetation within a protected area, natural forest, State Forest or of protected trees would require a license in terms of the NFA.

1.5.2 TIMEFRAME FOR AUTHORISATION:

The NFA does not specify timeframes for the processing of permit applications. However, it can be anticipated that this would take approximately 30-90 days from the date of submission to the DFFE.

⁶⁹ Section 2 of the NFA "protected area" means an area set aside by the Minister as a protected area in one of the categories referred to in section 8(1); (ii).

⁷⁰ Issued in terms of section 7(4) or section 23.

⁷¹ Section 10(1) of NFA.

⁷² Section 2 of the NFA "natural forest" means a group of indigenous trees- (a) whose crowns are largely contiguous; or (b) which have been declared by the Minister to be a natural forest under section 7(2).

⁷³ Issued in terms of section 7(4) or section 23.

⁷⁴ Section 7(1) NFA.

⁷⁵ Section 23(1): The following activities may be licensed in a State Forest: (a) the establishment and management of a plantation; (b) the felling of trees and removal of timber; (c) the cutting, disturbance, damage or destruction of any other forest produce; (d) the removal or receipt of any other forest produce; (e) the use of land, structures or buildings for agricultural, commercial, communications, domestic, industrial, residential or transportation purposes; (f) the use of roads; (g) the moving of water, electricity, gas, fuel and any other thing across a State forest; (h) the construction of any road, building or structure; (i) the grazing or herding of animals; (j) the cultivation of land; (k) hunting and fishing; (l) the use of a State forest for recreational, educational, cultural or spiritual purposes where there is no right to such use under section 19; and (m) the use of a State forest for any other purpose, if it is consistent with the sustainable management of the forest.

⁷⁶ Issued in terms of section 7(4) or section 23.

⁷⁷ Section 23(2) of NFA.

1.5.3 APPEAL OF FORESTRY AUTHORISATION:

The NFA does not make provision to appeal the authorisations granted.

1.5.4 POTENTIAL RISKS:

It is an offence to carry on certain activities in a protected area, natural forest, State forest or involving protected trees without a license. Where the activity is conducted in a protected area⁷⁸ or natural forest,⁷⁹ the offender will be guilty of a second category offence. Where the activity undertaken without a licence involves a protected tree, the offender will be guilty of a first category offence.⁸⁰ Where the activity is conducted in State forest that is a protected area, the offender will be guilty of a third category offence, or a fourth category offence, if the State forest is not a protected area.⁸¹

A person convicted of a first category offence may be sentenced to a fine or imprisonment for a period of up to three years, or to both a fine and such imprisonment.⁸² A second category offence carries a sentence to a fine or imprisonment for a period of up to two years, or to both a fine and such imprisonment.⁸³ A person who is guilty of a third category offence may be sentenced on a first conviction for that offence to a fine or imprisonment for a period of up to one year, or to both a fine and such imprisonment.⁸⁴ A person who is guilty of a fourth category offence may be sentenced on a first conviction for that offence to a fine or community service for a period of up to six months or to both a fine and such service.⁸⁵ A person who is guilty of a third or fourth category offence may be sentenced on a second conviction for that offence as if he or she has committed a, second or third category offence, respectively.⁸⁶

⁷⁸ Section 62(2)(a).

⁷⁹ Section 62(1).

⁸⁰ Section 62(2)(c).

⁸¹ Section 63(4)

⁸² Section 58(1)

⁸³ Section 58(2)

⁸⁴ Section 58(3)

⁸⁵ Section 58(4)

⁸⁶ Section 58(5)

To avoid the preferred bidder being subject to the fines and disruptions associated with failing to secure the above-mentioned permits, the Municipality should ensure that all required biodiversity permits that are required in terms of the NFA are secured prior to development.

1.6 NATIONAL HERITAGE RESOURCES ACT NO. 25 OF 1999

1.6.1 STATUTORY TRIGGER FOR AUTHORISATION:

The NHRA seeks to conserve heritage resources, regulate and govern heritage resources management throughout the Republic and to provide for the protection and management of preservation-worthy places and areas by local authorities.

In terms of NHRA, permits may be required for any intervention or disturbance of heritage, archaeological, meteorite or palaeontological resources or sites.

Certain developments require the approval of heritage resources authorities in terms of the NHRA in order to proceed. These activities include:⁸⁷

- linear developments such as power lines, roads, walls, pipelines and canals or similar form of linear development or barrier exceeding 300m in length;
- a development requiring the rezoning of a site exceeding 10,000m² in extent; and
- developments or other activities which will change the character of sites which:
 - are more than 5,000 m² in extent;
 - involve three or more erven or subdivisions;
 - involve three or more erven or subdivisions that have been consolidated in the last five years; and
 - developments whose costs will exceed a sum set by the national or provincial heritage authority.

⁸⁷ Section 38(1)

- any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

The NHRA requires the developer to notify the heritage resources authority of the project at the very earliest stages of an initiating a development that gives rise to any of the triggers above. The authority must either notify the developer that the provisions of the NHRA do not apply or require the developer to undertake an HIA and provide it with a report.⁸⁸ On the basis of the report the authority will advise the developer, among other things, whether the development may proceed and under what conditions.⁸⁹

In practice, the HIA is usually undertaken as part of the NEMA EIA process. The NHRA provides for an exclusion to the legal requirement to notify the relevant heritage resources authority if an evaluation of the impact of a development on heritage resources is required in terms of other legislation. Section 24(4)(b)(iii) of NEMA requires that potential environmental impacts that may arise from activities listed in regulations to NEMA for which EAs are required must be assessed in an application for an EA. This specifically includes an assessment of the impact of any listed activity on any heritage resource.

Should NEMA apply, an HIA Report (which is to be compiled at the cost of the developer by persons approved by the responsible Heritage Resources Authority) will need to be submitted to the relevant heritage resources authority and any limitations or conditions that are recommended by this authority will need to be taken into account by the competent authority in terms of NEMA. This is because the exclusion in section 38(8) of the NHRA is subject to the NEMA authority ensuring that the evaluation fulfils the requirements of the relevant heritage resources authority and any comments / recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the authorisation.

If NEMA does not apply, notification in terms of the provision above will be required which is likely to result in the request that an HIA be prepared to be submitted to the authorities for their decision.

A permit is required to destroy, damage, excavate, alter, deface or disturb any archaeological or palaeontological site or any meteorite and a person who discovers such archaeological or

⁸⁸ Section 38(2)

⁸⁹ Section 38(4)

palaeontological object or material or meteorite in the course of a development is obliged to report the find to the responsible heritage authority immediately.⁹⁰

Finally, section 34(1) of the NHRA prohibits the altering or demolition of any structure⁹¹ or part of any structure which is older than 60 years, unless a permit has been issued by a relevant provincial heritage resources authority.

The relevant authority presiding over heritage resources is SAHRA at a national level and Heritage Western Cape at the Western Cape provincial level.

1.6.2 TIMEFRAME FOR AUTHORISATION:

The permitting process is described in the NHRA Regulations promulgated under the NHRA.⁹²

The NHRA Regulations do not specify timeframes for the processing of permit applications. However, the authorisation process can take up to approximately 30-90 days from the date of submission to the SAHRA.

1.6.3 APPEAL OF HERITAGE AUTHORISATION:

Where a party intends to appeal against the decision of the National SAHRA Council, they must notify the Minister of Arts and Culture or MEC in writing within 30 days. The Minister of Arts and Culture or MEC shall appoint an independent tribunal, consisting of three experts to consider the appeal with regard to the cultural significance of the heritage resources, heritage conservation principles and any other relevant factor which is brought to its attention by the appellant or the heritage resources authority.⁹³

Where a party wishes to appeal against the decision of a provincial heritage resources authority in the Western Cape, the appeal authority is Heritage Western Cape. The Regulations relating to the

⁹⁰ Section 35(4).

⁹¹ A "structure" is defined as any building, works, device or other facility made by people and which is fixed to land, and includes any associated fixtures, fittings and equipment. An "alteration" is any action affecting the structure, appearance or physical properties of a place or object, whether by structural or other works, by painting, plastering or decoration or any other means.

⁹² GNR 548 in *Government Gazette* no 24893 of 2 June 2000.

⁹³ Section 49.

Establishment of Provincial Heritage Resources Authority, 2002⁹⁴, require any person affected by a decision of a committee to grant or refuse a permit may lodge an appeal with the Council of Heritage Western Cape within 14 working days from the date on which the decision was made known to the applicant. It further requires the Council of Heritage Western Cape or appeal committee to consider the appeal within 21 working days of receiving the appeal.⁹⁵

The decision relating to the granting or refusal of a permit will not come into effect until the appeal period has expired or until the appeal lodged has been determined to be upheld, amended or dismissed.⁹⁶

1.6.4 POTENTIAL RISKS:

It is an offence to destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority⁹⁷ or local authority responsible⁹⁸ for the protection of such site. A person convicted of such an offence is liable to a fine or imprisonment for a period not exceeding five years or both such fine and imprisonment.⁹⁹

It is an offence to destroy, damage, excavate, alter, deface or otherwise disturb, or remove from its original position, collect or own any archaeological or palaeontological site or any meteorite.¹⁰⁰ A person convicted of such an offence is liable a fine or imprisonment for a period not exceeding three years or both such fine and imprisonment.¹⁰¹

⁹⁴ PN 336 in the Western Cape Provincial Gazette of 25 October 2002.

⁹⁵ Section 12(1) of PN 336 in the Western Cape Provincial Gazette of 25 October 2002.

⁹⁶ Section 12(2) of PN 336 in the Western Cape Provincial Gazette of 25 October 2002.

⁹⁷ Section 27(18).

⁹⁸ Section 29(10).

⁹⁹ Section 51(1)(a).

¹⁰⁰ Section 35(4).

¹⁰¹ Section 51(1)(b).

Where any law does not prescribe the amount of the fine, the Fines Act¹⁰² applies which provides that the penalty for an offence is a fine of up to R120,000.00 in a District Court or R600,000.00 in a Regional Court.¹⁰³

1.7 WATER SERVICES ACT NO. 108 OF 1997

1.7.1 STATUTORY TRIGGER FOR AUTHORISATION:

The WSA seeks to, *inter alia*, provide for the rights of access to basic water supply and sanitation services and a regulatory framework for water services institutions and water services intermediaries.

Section 7 prohibits sourcing water for industrial use from any place other than the distribution system of a water services provider chosen by the water services authority without approval of that water services authority.¹⁰⁴ "Industrial use" is defined in the WSA to include water used for generating electricity, construction or any related purpose. In this regard, section 7(1) of the WSA provides that no person may obtain water for industrial use from any source other than the distribution system of a water services provider nominated by the water services authority having jurisdiction in the area in question, without the approval of that water services authority. To the extent that the RE Facility secures water from a borehole for example, this would require section 7 consent from the Municipality.

Further, section 6 of the WSA prohibits the disposal of industrial effluent other than in the manner approved by the water service authority.¹⁰⁵ Sanitation services are considered water services for the purposes of the WSA. In this regard, section 6(1) of the WSA provides that no person may use water services from a source other than a water services provider nominated by the water services authority having jurisdiction in the area in question, without the approval of that water services authority. To the

¹⁰² Adjustment of Fines Act 101 of 1991.

¹⁰³ Section 92 of the Magistrates' Courts Act provides "(1) Save as otherwise in this Act or in any other law specially provided, the court, whenever it may punish a person for an offence: (a) by imprisonment, may impose a sentence of imprisonment for a period not exceeding three years, where the court is not the court of a regional division, or not exceeding 15 years, where the court is the court of a regional division; (b) by fine, may impose a fine not exceeding the amount determined by the Minister from time to time by notice in the Gazette for the respective courts referred to in paragraph (a); R120 000 where the court is not the court of a regional division, and R600 000 where the court is the court of a regional division, with effect from 1 February 2013 - GN 217 in GG 37477 of 27 March 2014.

¹⁰⁴ Section 7(1).

¹⁰⁵ Section 7(2).

extent that the RE Facility requires a third party to transport and dispose of its sewage for example, this would require section 6 consent from the Municipality.

1.7.2 TIMEFRAME FOR AUTHORISATION:

The WSA does not prescribe timeframes for receiving necessary approvals, this will largely depend on the availability and capacity of the local municipality.

Where the decision regarding approvals is not made within a reasonable time, it will constitute sufficient grounds for an appeal to be submitted to the Minister of Water and Sanitation.¹⁰⁶

On appeal, it is likely that the Minister of Water and Sanitation will order the local authority to make a decision within a strict prescribed time period.

1.7.3 APPEAL OF WATER SERVICES AUTHORISATION:

Any applicant for approval may submit an appeal against the decision of the water services authority to the Minister of Water and Sanitation. The proposed appellant must submit the appeal in writing within 21 days of becoming aware of the decision.¹⁰⁷

The WSA does not prescribe the timeframe in which appeals are to be determined, however in terms of the Promotion of Administrative Justice Act 3 of 2000, the failure to make a decision within a reasonable timeframe constitutes valid grounds to institute review proceedings through a competent court.¹⁰⁸

The order sought will likely compel the Minister of Water and Sanitation to make a decision on the appeal within a strict timeframe.

1.7.4 POTENTIAL RISKS:

It is an offence to utilise water services, use water or dispose of effluent contrary to the provisions of section 6 and 7 above.

¹⁰⁶ Section 8(6).

¹⁰⁷ Section 8(4) of WSA.

¹⁰⁸ Section 6(1)(g).

If a person is found guilty of an offence, they will be liable to a fine or to imprisonment or to both such fine and imprisonment.

The Fines Act is applicable where legislation does not prescribe the amount of the proposed fine, the penalty for an offence is a fine of up to R120,000.00 in a District Court or R600,000.00 in a Regional Court.¹⁰⁹

1.8 CONSERVATION OF AGRICULTURAL RESOURCES ACT NO. ACT 43 OF 1983

1.8.1 STATUTORY TRIGGER FOR AUTHORISATION:

CARA applies to any land situated outside an urban area. The objective of CARA is to control the use of natural agricultural resources to ensure the conservation of soil, water and vegetation, as well as prescribing measures for combating alien and invasive plants.

The control measures are primarily set out in Conservation of Agricultural Resources Regulations¹¹⁰. In terms of regulation 2(1), a permit is required for the “cultivation” of virgin soil. Cultivation means “*in relation to land, any act by means of which the topsoil is disturbed mechanically*”. Virgin land means “*land which in the opinion of the executive officer has at no time during the preceding ten years been cultivated*”.

CARA requires a permit for any act by means of which the topsoil (of virgin soil) is disturbed mechanically. It is not qualified by a requirement that it is disturbed for an agricultural purpose. The only circumstance in which it would not be needed is if one can show that the land has been cultivated in the last 10 years, in which case it is not “virgin land” as defined.

¹⁰⁹ Section 92 of the Magistrates' Courts Act provides “(1) Save as otherwise in this Act or in any other law specially provided, the court, whenever it may punish a person for an offence: (a) by imprisonment, may impose a sentence of imprisonment for a period not exceeding three years, where the court is not the court of a regional division, or not exceeding 15 years, where the court is the court of a regional division; (b) by fine, may impose a fine not exceeding the amount determined by the Minister from time to time by notice in the Gazette for the respective courts referred to in paragraph (a); R120 000 where the court is not the court of a regional division, and R600 000 where the court is the court of a regional division, with effect from 1 February 2013 - GN 217 in GG 37477 of 27 March 2014.

¹¹⁰ Government Notice R1048 in Government Gazette 9238 of 25 May 1984.

It is possible that a permit in terms of CARA is required where the development of the RE Facility will entail the disturbance of virgin topsoil on any land situated outside an urban area.¹¹¹

1.8.2 TIMEFRAME FOR AUTHORISATION:

CARA does not prescribe timeframes for the permitting process. However, the authorisation process can take approximately 30-90 days from the date of submission.

The disturbance of virgin topsoil is an aspect that will be assessed and determine during the EIA process. The application for approval in terms of CARA should be made, depending on the soil studies conducted by an EAP as part of the EIA process.

1.8.3 APPEAL OF CARA AUTHORISATION:

Any person intending to appeal against the decision of an executive officer may do so by filing a written appeal submission to the Director-General of DALRRD within 90 days of the relevant decision.¹¹² The appeal must be accompanied by a fee of R100.00.¹¹³

1.8.4 POTENTIAL RISKS:

Any land user that fails to comply with the control measures, including disturbing virgin topsoil, prescribed in terms of CARA shall be guilty of an offence.¹¹⁴

¹¹¹ A narrow interpretation of 'cultivation' is in line with a judgment of the Supreme Court of Appeal (HTF Developers (Pty) Ltd v The Minister of Environmental Affairs and Tourism [2007] SCA 37 RSA) which held at par 7 "...it is difficult to see how 'cultivate' in the definition of virgin ground can be extended beyond agricultural activity. From this it follows that the definition is limited to land destined for agricultural purposes." But on the other hand, a statute often gives a word a defined meaning which does not accord completely with its ordinary meaning. See *Canca v Mount Frere Municipality* 1984 (2) SA 830 Tk at 832: "The principle that emerges [from earlier cases referred to by the Court] is that the statutory definition should prevail unless it appears that the Legislature intended otherwise, and in deciding whether the Legislature so intended, the Court has generally asked itself whether the application of the statutory definition would result in such injustice or incongruity or absurdity as to lead to the conclusion that the Legislature could never have intended the statutory definition to apply." It is therefore unclear whether a permit is required.

¹¹² Section 21(1).

¹¹³ Section 21(3).

¹¹⁴ Section 6(5).

Upon conviction such person will be liable to a fine not exceeding R5,000 or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment.¹¹⁵

Upon a subsequent conviction of an offence, whether the same or any other offence, such person is liable to a fine not exceeding R10,000 or to imprisonment for a period not exceeding four years or to both such fine and such imprisonment.¹¹⁶

2. MUNICIPAL APPROVALS

As regards the Municipality, the possible applicable by-laws include the Water Services By-law, which prohibits the use of water obtained from a source other than the water supply system, other than rain water tanks which are not connected to the water installation, without the prior approval of the engineer, and in accordance with necessary conditions as for domestic, commercial or industrial purposes.¹¹⁷

In addition, the sinking of a borehole in a dolomite area is prohibited. Prior to sinking a borehole on premises, a study of the surrounding rock material must be conducted to determine whether the premises are situated in a dolomite area.¹¹⁸

Further, the discharge or cause of any sewage to be discharged directly or indirectly into a storm-water drain, river, stream or other watercourse, whether natural or artificial is prohibited.¹¹⁹

In terms of the Stormwater By-Law 2020, no person may discharge, permit, cause or allow to enter or place onto any substance other than stormwater, where that substance could reasonably be expected, or is likely, to find its way into the stormwater system, without the prior written permission of the Municipality.¹²⁰

¹¹⁵ Section 23(1)(a).

¹¹⁶ Section 23(1)(b).

¹¹⁷ Section 163(1).

¹¹⁸ Section 100(1).

¹¹⁹ Section 159(1).

¹²⁰ Section 5(1).

2.1 TIMEFRAME FOR AUTHORISATION:

The Municipal by-laws do not stipulate specific timeframes for approvals. Instead, the timeframe will be determined based on the Municipality's availability and capacity at the time of requesting the relevant approvals and permissions.

2.2 APPEAL OF MUNICIPAL AUTHORISATION:

In terms of the Water Services By-law, an appeal may be submitted in writing against a decision of, or a notice issued by, the Municipality.¹²¹ The appeal must be lodged with the Municipality within 14 (fourteen) days after a customer became aware of the decision or notice.¹²² The appeal must be decided by the Municipality within 14 (fourteen) days after an appeal was lodged, and the customer must be informed of the outcome in writing, as soon as possible thereafter.¹²³

2.3 POTENTIAL RISKS:

Failure to comply with the Water Services By-law is an offence and, if convicted, the offender will be liable for a fine or to imprisonment if he/she is unable to afford to pay a fine.¹²⁴ Any person committing a breach of the provisions of these By-laws shall be liable to recompense the Municipality for any loss or damage suffered or sustained by it in consequence of the breach.¹²⁵

The amount of the fine is largely decided at the discretion of the Municipality. In terms of the Integrated Waste By-laws, the fines range from R500.00 – R2 500.00 depending on the offence committed.

¹²¹ Section 166(1)

¹²² Section 166(2)

¹²³ Section 166(3)

¹²⁴ Section 167(2)

¹²⁵ Section 167(3)

3. OTHER CONSENTS

3.1 CIVIL AVIATION ACT NO. 13 OF 2009

3.1.1 STATUTORY TRIGGER FOR AUTHORISATION:

The CA Regulations¹²⁶ deal with obstacle limitations and markings outside aerodromes or heliports and provides, *inter alia*, that:

- The holder of an airport licence shall not let anyone build a building, structure, or object that extends above a slope of 1 in 20 and is located within 3,000m from the airport boundary, without the prior approval of the Director of SACAA.¹²⁷
- The holder of an airport licence shall not allow the construction of a structure or object that could impede or be dangerous to aircrafts flying near the airport, or affect the functioning of radio navigation or ILS systems, without first getting approval from the Director of SACAA.¹²⁸
- The holder of an airport licence cannot allow the construction of an object that is taller than 45m above the ground where airplanes land, or within 8km from the airport boundary, without first getting approval from the Director of SACAA.¹²⁹
- The holder of an airport licence shall not allow anyone to build a structure, building or other object that extends above the height limitation placed upon obstacles within the vicinity of an airport, without first getting approval from the Director.¹³⁰
- Any structure or object, whether natural or artificial, which has the potential of interfering or degrading radio signals for the purpose of aviation safety, shall be allowed to come in existence or to move or be moved within the surfaces and slopes as prescribed in the Document SA-CATS 171.¹³¹

¹²⁶ GNR.425 of 1 June 2012.

¹²⁷ CA Regulation 139.01.30(3).

¹²⁸ CA Regulation 139.01.30(6).

¹²⁹ CA Regulation 139.01.30(7).

¹³⁰ CA Regulation 139.01.30(9).

¹³¹ CA Regulation 171.03.3.

Further, consideration needs to be given to the Environmental Themes Regulation, when applying for environmental authorisation.¹³² In terms of section 2.3.4 of the Environmental Themes Regulation, the required compliance statement from the environmental impact assessment practitioner that is to be included in the BAR or SEIAR must contain, as minimum, the following information:

“a comment, in writing, from the South African Civil Aviation Authority (SACAA), which may include inputs from the Obstacle Evaluation Committee (OEC), if appropriate, confirming no unacceptable impact on civil aviation installations; and 2.3.5. should the comment from the SACAA indicate the need for further assessment, a copy of the assessment report and mitigation measures is to be attached to the compliance statement and incorporated into the Basic Assessment Report or Environmental Impact Assessment Report with mitigation and monitoring measures identified included in the EMPr. The assessment must be in accordance with the requirements stipulated by the SACRA.”

The relevant authority to which the request for civil aviation approval must be submitted is the SACAA.

3.1.2 TIMEFRAME FOR AUTHORISATION:

The CA Regulations do not specify timeframes for the granting of approval, however, in our experience a letter regarding civil aviation approval may be received within 30 – 90 days of application to the SACAA.

3.1.3 APPEAL OF CIVIL AVIATION APPROVAL:

There are no provisions relating to an appeal of a decision regarding civil aviation approval.

3.1.4 POTENTIAL RISKS:

Section 133 of the Civil Aviation Act states that it is an offence to perform any act that endangers the safety of an aircraft, including intentionally interfering with the operation of an aircraft which may include

¹³² GN 320 of 20 March 2020

unlawful interference with its ATS frequency,¹³³ and prescribes a penalty of a fine or imprisonment not exceeding 30 years or both.¹³⁴

Alternately, section 144 of the Civil Aviation Act states that any person who contravenes or commits an offence under that Act, or who fails to comply with any provision with which it is his or her duty to comply, is, except where another penalty is specially provided, liable on conviction to a fine or to imprisonment for a period not exceeding 10 years or to both such fine and imprisonment.

Where any law does not prescribe the amount of the fine, the Fines Act applies. The Fines Act provides that the penalty for an offence is a fine of up to R120,000.00 in a District Court, or R600,000.00 in a Regional Court.¹³⁵

In terms of the CA Regulations,¹³⁶ it is an offence to act contrary to or failure to comply with the provisions of the Civil Aviation Act and the CA Regulations. The following penalties may be imposed:

- An administrative penalty levied upon persons in accordance with regulation 185.01.2(f), shall be commensurate with the severity of the offence and shall not exceed R24 000 for the first offence, R48 000 for the second offence and R96 000 for the third offence.
- Depending on the specific circumstances, a discretionary fine may be imposed upon legal persons in accordance with regulation 185.01.2(m).

¹³³ Section 133(d) of the Civil Aviation Act provides "A person who wilfully destroys or wilfully damages air navigation facilities or wilfully interferes with their operation, which interference is likely to endanger the safety of aircraft;

¹³⁴ Section 133(j) of the Civil Aviation Act provides "A person who wilfully performs any other act which jeopardises or may jeopardise-

(i) the operation of an air carrier;

(ii) the safety of an airport, heliport, aircraft in service or of persons or property at such airport, heliport or of such aircraft, is guilty of an offence and liable on conviction to a fine or to imprisonment not exceeding 30 years or to both such fine and imprisonment.

¹³⁵ Section 92 of the Magistrates' Courts Act provides "(1) Save as otherwise in this Act or in any other law specially provided, the court, whenever it may punish a person for an offence :

(a) by imprisonment, may impose a sentence of imprisonment for a period not exceeding three years, where the court is not the court of a regional division, or not exceeding 15 years, where the court is the court of a regional division;

(b) by fine, may impose a fine not exceeding the amount determined by the Minister from time to time by notice in the Gazette for the respective courts referred to in paragraph (a); R120 000 where the court is not the court of a regional division, and R600 000 where the court is the court of a regional division, with effect from 1 February 2013 - GN 217 in GG 37477 of 27 March 2014.

¹³⁶ Regulation 185.01.2(m)

- Verbal counselling, a letter of warning, remedial training or administrative penalties.¹³⁷

The enforcement officer will determine the relevant regulation breached and the corresponding penalty imposed.¹³⁸ If any person fails to pay an administrative penalty, within the specified period, the Director may, by civil action in a competent court, recover such administrative penalty from such person as prescribed in section 144 of the Civil Aviation Act.¹³⁹

3.2 ELECTRONIC COMMUNICATIONS ACT NO. 36 OF 2005

3.2.1 STATUTORY TRIGGER FOR AUTHORISATION:

Section 29(1) of ECA provides that individuals or entities undertaking the construction, equipping, or operation of any railway or facilities for generating electricity for light, heat, or power are required to:

- adhere to the standards set by an electronic communications network service licensee to prevent harm to its electronic communications network and facilities; and
- provide a 30-day advance written notification to the electronic communications network service licensee before starting any such projects.

In cases where the electronic communications network service licensee deems that any planned or ongoing construction, equipment, or operation poses a risk of damage to its electronic communications infrastructure; or any damage occurs to its electronic communications infrastructure due to such activities, the licensee must promptly inform the responsible party of its conditions for preventing further damage.¹⁴⁰

If an individual or entity, upon receiving the above-mentioned notification, continues with the construction, equipment, or operation against the specified conditions, they may be held responsible

¹³⁷ CA Regulation 185.03.1 provides “The following penalties may be imposed on an offender following an investigation: (a) verbal counselling; (b) letter of warning; (c) remedial training; (d) administrative penalties; and (e) suspension, downgrade, endorsement or cancellation.”

¹³⁸ CA Regulation 185.02.1 provides “An enforcement officer may take administrative action which may result in the imposition of a penalty prescribed in regulation 185.03.1 where it is established, on a balance of probabilities, that the conduct of a person or entity constitutes an offence and that such conduct was grossly negligent or wilful.”

¹³⁹ CA Regulation 185.03.2(2)

¹⁴⁰ Section 29(2)

for compensating the electronic communications network service licensee for any damages resulting from non-compliance with paragraph 124.¹⁴¹

The ECA requirement is one of a notice of construction and subsequent notice of the electronic communications network service licensee's requirements. It is not akin to a permit or authorisation that is specific to a person but rather a means of communicating requirements to avoid damage.

This request for approval may be sent to various telecommunications networks. The possible telecommunications networks existing in the development area must be studied and the relevant approvals must be sought prior to construction of the RE Facility.

3.2.2 TIMEFRAME FOR AUTHORISATION:

ECA does not prescribe a timeframe for approval. However, it can take up to approximately 30-60 days from the date of request regarding whether any communication networks will be disrupted.

3.2.3 APPEAL OF ECA AUTHORISATION:

There are no appeal provisions in terms of ECA.

3.2.4 POTENTIAL RISKS:

The ECA does not prescribe penalties for the failure to obtain approval from electronic service providers prior to the commencement of development. However, where any telecommunication network is disrupted the developer may be responsible for harm caused and liable to damages to compensate for the disruption.

To the extent that consent is not secured from an electronic communications network service licensee, the relevant preferred bidder / seller may be liable for any damage caused to their infrastructure, or may face the risk of an interdict. Further, the electronic communications network service licensee may require the relocation of their infrastructure, at the cost of the bidder / seller, as a condition to providing consent to the RE Facility and Grid Infrastructure.

¹⁴¹ Section 29(3)

As a result it is important to receive all relevant letters of no objection prior to financial close.

3.3 SOUTH AFRICAN NATIONAL DEFENCE FORCE

3.3.1 STATUTORY TRIGGER FOR AUTHORISATION:

Table 1 of the Environmental Themes Regulation provides that the EAP that prepares the BAR or SEIAR must provide a compliance statement, which in terms of section 2.3.4 must contain, as a minimum, a comment in writing from the Department of Defence confirming no unacceptable impact on military areas of interest. Section 2.3.5 provides that should the comment from the Department of Defence indicate the need for further assessment, a copy of the assessment report and mitigation measures is to be attached to the compliance statement and incorporated into the BAR or SEIAR with monitoring measures included in the EMPr. The assessment must be in accordance with the requirements of the Department of Defence.

The request for approval ensures that there will be no electro-magnetic interference with the Department of Defence's communication installation, which is a vital part of the operations ensuring safety and security in the country.

3.3.2 TIMEFRAME FOR AUTHORISATION:

There are no timeframes prescribed to obtain approval from the SANDF.

3.3.3 APPEAL OF SANDF APPROVAL:

There are no appeal procedures in relation to obtaining approval from the SANDF.

However, the authorisation process can take approximately 60-120 days from the date of request.

3.3.4 POTENTIAL RISKS:

Not obtaining approval from SANDF can have several significant consequences, given the importance of such approval in ensuring that new installations do not interfere with national security operations or telecommunications infrastructure.

Failure to secure the necessary approval may lead to legal action against the entity or individuals responsible for the facility, should SANDF infrastructure be effected by the RE Facility. This could include interdicts to halt construction or operation of the facility.

If interference to SANDF infrastructure occurs, it could necessitate costly modifications to the facility or relocation of SANDF infrastructure to eliminate the interference.

3.4 ASTRONOMY GEOGRAPHIC ADVANTAGE ACT NO. 21 OF 2007

3.4.1 STATUTORY TRIGGER FOR AUTHORISATION:

The AGA Act gives the Minister of Science and Technology the power to protect areas, through regulations, that are of strategic national importance for astronomy and related scientific endeavours.

The Minister of Science and Technology has declared the following areas as Core Astronomy Advantage Areas:

- All land in the Northern Cape Province situated within 250 kilometres from the centre of the SALT dome, for optical astronomy purposes. The whole of the territory of the Northern Cape Province excluding Sol Plaatje Municipality, for radio astronomy purposes.¹⁴²
- The Sutherland Central Astronomy Advantage Area consists of all land in the Northern Cape Province within an annulus of inner radius 3 kilometres and outer radius 75 kilometres centred on the dome of the SALT located at 32° 22' 33" S and 20° 48' 38" E.¹⁴³
- The Karoo Central Astronomy Advantage Areas consist of three partly overlapping areas with common inner boundaries that coincide with the outer boundaries of the Karoo Core Astronomy Advantage Area.¹⁴⁴
- The Karoo Central Astronomy Advantage Area 1 is the area between the boundaries of the Karoo Core Astronomy Advantage Area and outer boundaries in the form of a polygon for which a number of geographical coordinates are provided for in the regulations. The area is limited to the boundaries of the Northern Cape Province and does not include any area where the polygon may extend across

¹⁴² Declaration of Areas as Astronomy Advantage Areas Published under GN 115 in GG 32951 of 19 February 2010

¹⁴³ Declaration of the Sutherland Central Astronomy Advantage Area Published under GenN 199 of GG 37434 of 12 March 2014

¹⁴⁴ Declaration of the Karoo Central Astronomy Advantage Areas Published under GenN 198 in GG 37434 of 12 March 2014

the provincial border. This area will apply to radio astronomy observations in the frequency band from 100 to 2 170 MHz.

- The Karoo Central Astronomy Advantage Area 2 is the area between the boundaries of the Karoo Core Astronomy Advantage Area and outer boundaries in the form of a polygon for which a number of geographical coordinates are provided for in the regulations. This area will apply to radio astronomy observations in the frequency band from 2 170 to 6 000 MHz.
- The Karoo Central Astronomy Advantage Area 3 is the area between the boundaries of the Karoo Core Astronomy Advantage Area and outer boundaries in the form of a polygon for which a number of geographical coordinates are provided for in the regulations. This area will apply to radio astronomy observations in the frequency band from 6 000 to 25 500 MHz.

Subject to limited exceptions, the following activities within a core astronomy advantage area are prohibited:

- harmful industrial processes;
- the construction or expansion of road or rail transport networks or parts thereof;
- the operation, construction or expansion of facilities for the generation, transmission or distribution of electricity; and
- any other activity which may detrimentally impact on radio astronomy and related scientific endeavours, or the astronomy advantage of any core astronomy advantage area declared for the purposes of radio astronomy and related scientific endeavours.¹⁴⁵

A request regarding whether a Project will negatively impact the Square Kilometre Array telescope or any other astronomical infrastructure, must be to the SRAO. To the extent that the RE Facility will be located within any of the identified areas above, the relevant approval from SRAO must be secured prior to development of the RE Facility.

¹⁴⁵ Section 2 Core Astronomy Advantage Areas Regulations for Radio Astronomy Published under GN R465 in GG 35450 of 22 June 2012.

3.4.2 TIMEFRAME FOR AUTHORISATION:

The legislation and regulations do not specify the timeframe for approval. However, the approval or refusal can take between 1-3 months from the date of request. This is an estimate and will depend on the workload and capacity of the SARAO at the time of request.

3.4.3 APPEAL OF ASTRONOMY AUTHORISATION:

There are no provisions to appeal the decision of the SARAO.

3.4.4 POTENTIAL RISKS:

Any person who contravenes the astronomy regulations will be guilty of an offence and liable on conviction to a fine not exceeding R1,000,000 or to imprisonment not exceeding five years or to both a fine and such imprisonment.¹⁴⁶

Additionally, solar PV panels and the inverters that convert DC electricity to AC can produce electromagnetic interference that may affect the SKA's observations. The radio frequency interference from the electronic components used in solar facilities can obscure the faint signals from space that the SKA is designed to detect.

The construction and maintenance of large solar facilities involve significant movement and activity, including vehicles and machinery that could produce radio frequency interference. Additionally, the physical infrastructure could potentially block or reflect radio waves, thereby affecting the clarity and quality of the data collected by the telescope.

Depending on factual circumstances and the disruption caused, failure to obtain approval from the SARAO that results in unlawful interference may result in harm and the developer may be liable for damages caused.

Finally, a failure to secure SARAO approve could give rise to an interdict to halt construction or operation of the facility should the RE Facility be located in one of the identified areas above.

¹⁴⁶ Section 3 Core Astronomy Advantage Areas Regulations for Radio Astronomy Published under GN R465 in GG 35450 of 22 June 2012

3.5 SOUTH AFRICAN WEATHER SERVICE ACT NO. 8 OF 2001

3.5.1 STATUTORY TRIGGER FOR AUTHORISATION:

The South African Weather Service Act No. 8 of 2001 does not provide a statutory basis on which to seek and secure a letter of no objection from SAWS.

3.5.2 TIMEFRAME FOR AUTHORISATION:

The approval or refusal can take between 1-3 months from the date of request. However, this is an estimate and will depend on the workload and capacity of the SAWS at the time of request.

3.5.3 APPEAL:

There are no provisions to appeal the SAWS letter of no objection.

3.5.4 POTENTIAL RISKS:

SAWS may approach the courts for an interdict, in instances where the RE Facility directly impacts the SAWS radar stations and for which a letter of no objection was not obtained. Further, there may be a need to amend the layout to avoid SAWS infrastructure or the incurral of costs in relocating SAWS infrastructure, with consequent delays.

3.6 NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT NO. 103 OF 1977

3.6.1 STATUTORY TRIGGER FOR AUTHORISATION:

Subject to limited exemptions, erecting any building¹⁴⁷ in respect of which plans and specifications are to be drawn and submitted in terms of the NBR&BSA is prohibited, without the approval in writing of the local authority.¹⁴⁸ To the extent that a building is being erected as contemplated in the NBR&BSA, application will need to be made to the relevant local authority and approval from such authority will be required in terms of the NBR&BSA and Regulations.¹⁴⁹

The development of the RE Facility will entail the construction of various buildings and associated infrastructure. Approval from the Municipality must therefore be secured prior to the commencement of construction.

3.6.2 TIMEFRAME FOR AUTHORISATION:

The NBR&BSA does not prescribe timeframes for approval. This will largely depend on the capacity of the Municipality at the time of the request.

3.6.3 POTENTIAL RISKS:

Section 4(4) of the NBR&BSA provides that it is an offence to erect a building without securing prior approval. Anyone found guilty of such an offence will be liable to a fine not exceeding R100 for each day on which he was engaged in so erecting such building. Section 4(4) read with section 4(1), creates a criminal offence with a penal sanction in the event of a building being erected without approved

¹⁴⁷ The NBR&BSA defines “building” to include—(a) any other structure, whether of a temporary or permanent nature and irrespective of the materials used in the erection thereof, erected or used for or in connection with— (i) the accommodation or convenience of human beings or animals; (ii) the manufacture, processing, storage, display or sale of any goods; (iii) the rendering of any service; (iv) the destruction or treatment of refuse or other waste materials; (v) the cultivation or growing of any plant or crop; (b) any wall, swimming bath, swimming pool, reservoir or bridge or any other structure connected therewith; (c) any fuel pump or any tank used in connection therewith; (d) any part of a building, including a building as defined in paragraph (a), (b) or (c); (e) any facilities or system, or part or portion thereof, within or outside but incidental to a building, for the provision of a water supply, drainage, sewerage, stormwater disposal, electricity supply or other similar service in respect of the building.

¹⁴⁸ Section 4(1) of NBR&BSA.

¹⁴⁹ GNR in Government Gazette 12780 of 12 October 1990.

building plans. Section 24 provides that any person convicted of such an offence shall be liable to a fine not exceeding R4,000 or to imprisonment for a period not exceeding 12 months.

Section 14(1) creates a criminal offence with a penal and imprisonment sanction in the event of a building being occupied without an occupancy certificate. Finally, section 21 of the NBR&BSA provides that *“a magistrate shall have jurisdiction, on the application of any local authority or the Minister, to make an order prohibiting any person from commencing or proceeding with the erection of any building or authorising such local authority to demolish such building if such magistrate is satisfied that such erection is contrary to or does not comply with the provisions of this Act or any approval or authorisation granted thereunder.”*

In this regard the Supreme Court of Appeal in *Lester v Ndlambe Municipality*¹⁵⁰ effectively held that if building plan approval under the NBR&BSA is not received, a magistrate has no discretion but to order a demolition in terms of section 21 of that Act. The Court held that once illegality had been established, the language of section 21 gives a magistrate no latitude but to order the demolition. The Court held further that to do otherwise would be to countenance an ongoing illegality that is a criminal offence, which would subvert the doctrine of legality and undermine the rule of law.

¹⁵⁰ *Lester v Ndlambe Municipality* (514/12) [2013] ZASCA 95 (22 August 2013).

APPENDIX 1 : SCHEDULE 1 – EA EXEMPTIONS

NOTICES AND AMENDMENTS IN RESPECT OF TIMEFRAMES FOR CERTAIN EAS RELATING TO RENEWABLE ENERGY PROJECTS
<p>Notice of Identification in terms of Section 24(5)(a) and (b) of NEMA of the Procedure to be Followed in Applying for EA for Large Scale Wind and Solar Photovoltaic Energy Development Activities Identified in terms of Section 24(2)(a) of NEMA when occurring in Geographical Areas of Strategic Importance (GN. 114 in GG 41445 of 16 February 2018). In terms of this Notice, eight (8) REDZ are identified as being important for the development of large scale wind and solar PV facilities (including the procedure to be followed when applying for EA for large scale wind and solar photovoltaic energy facilities when occurring in these REDZs). REDZs were identified through the undertaking of two (2) Strategic Environmental Assessments, the first being finalised in 2015 and the second being finalised in 2019. Timeframe for deciding an EA for projects in REDZ is 57 days.</p>
<p>Identification of Procedures to be Followed When Applying for or Deciding on an EA Application for Large Scale Wind and Solar PV Facilities, when occurring in REDZ (GN. 142 in GG 44191 of 26 February 2021). Identification of Geographical Areas of Strategic Importance for the Development of Large Scale Wind and Solar PV Energy Facilities (GN. 144 in GG 44191 of 26 February 2021). The Minister published the abovementioned Notices which identified three (3) additional REDZs for implementation, as well as the procedures to be followed when applying for EAs for large scale wind and solar PV energy facilities in these REDZs. Timeframe for deciding an EA in REDZ is 57 days.</p>
<p>Consultation on the Intention to Exclude the Development and Expansion of Solar PV Installations from the Requirement to Obtain an EA based on Compliance with an Adopted Environmental Management Instrument (GN. 2466 in GG 46871 of 8 September 2022). These regulations aim to exclude certain solar projects from the requirement to obtain an EA prior to commencement. However, paragraph 7.1 provides that at least 15 days prior to the expected commencement date of the proposed development or expansion, the person that intends to undertake an activity contemplated in paragraph 4 must register or re-register the proposed facility and infrastructure with the competent authority. Paragraph 9.1 states that within 10 days of receipt of the correctly completed registration form and supporting documentation described in paragraph 7 of this Schedule, the competent authority must register the proposed development or expansion and provide the proponent with a registration number.</p>
<p>Adoption of the Solar Exclusion Norm and Exclusion of the Development and Expansion of Solar PV Facilities from the Requirement to obtain an EA (GN. 4558 in GG 50388 of 27 March 2024), including: (i) rules for development and expansion of solar PV facilities and listed activities associated with and integral to realisation of such facility which may be excluded from the requirement to obtain an EA prior to commencement; and (ii) norms for the exclusion of the development and expansion of solar PV</p>

facilities in areas of low or medium environmental sensitivity. The Norm and rules exclude certain solar PV projects from the requirement to obtain an EA prior to commencement in “low” or “medium” environmental sensitivity areas, with the exception of linear infrastructure integral to the facility which is located in a pre-negotiated corridor, which may be located in areas of “very high”, “high”, “medium” or “low” environmental sensitivity. The Norm excludes: (i) Activity 1 or 36 of Listing Notice 1; (ii) Activity 1 of Listing Notice 2; and (iii) any associated activity in Listing Notices 1, 2 or 3 necessary for the realisation of such facility. Further, identified activities for the development or expansion of battery storage facilities, associated with or integral to the operation of the solar PV facility, are to be registered under this Norm and not the Norm for the exclusion of identified activities associated with the development and expansion of battery storage facilities in areas of low or medium environmental sensitivity.

Adoption of the Battery Storage Exclusion Norm and exclusion of Identified Activities Associated with the Development and Expansion of Battery Storage Facilities from the Requirement to obtain an EA (GN. 4557 in GG 50387 of 27 March 2024), including a norm for the exclusion of identified activities associated with the development and expansion of battery storage facilities in areas of “low” or “medium” environmental sensitivity. The Norm excludes certain development or expansion projects of battery storage facilities associated with energy generation and electricity transmission and distribution infrastructure from the requirement to obtain an EA prior to commencement in “low” or “medium” environmental sensitivity areas, with the exception of linear infrastructure integral to the facility which is located in a pre-negotiated corridor, which may be located in areas of “very high”, “high”, “medium” or “low” environmental sensitivity. The Norm excludes: (i) Activity 11, 12(ii)(a), 14, 19, 24, 27, 28(ii), 47, 48(i)(a), 51 and 67 of Listing Notice 1; (ii) Activity 4 and 9 of Listing Notice 2; and Activity 3 of Listing Notice 3, including any single activity or several activities combined.

NOTICES AND AMENDMENTS IN RESPECT OF TIMEFRAMES FOR CERTAIN EAS RELATING TO GRID INFRASTRUCTURE

Identification of Procedures to be Followed When Applying for or Deciding on an EA Application for the Development of Electricity Transmission and Distribution Infrastructure when occurring in REDZ (GN. 145 in GG 44191 of 26 February 2021). The Minister published Notice which identified procedures to be followed when applying for EA for electricity transmission or distribution infrastructure in the REDZs. Timeframes for a decision on an EA application is 57 days.

Notice on the Adoption of the Standard for the Development and Expansion of Power Lines and Substations within Identified Geographical Areas and the Exclusion of this Infrastructure from the Requirement to Obtain an EA (GN. 2313 in GG 47095 of 27 July 2022) including (i) exclusion of activities which relate to the development and expansion of electricity transmission and distribution infrastructure as well as any listed or specified activities necessary for the realisation of such infrastructure which

includes substations and (ii) standard for the Development and Expansion of Power Lines and Substations within Identified Geographical Areas (Revision 2 of June 2022).
Consultation on the Intention to Adopt a Standard for the Development and Expansion of Electricity Transmission and Distribution Power Line Infrastructure and to Exclude this Infrastructure from the Requirement to Obtain an EA; as well as to Repeal the Standard for the Development and Expansion of Power Lines and Substations within Identified Geographical Areas and the Exclusion based on this Standard published under GN. 2313 in GG 47095 of 27 July 2022 (GN. 4586 in GG 50417 of 28 March 2024). The Standard will exclude the requirement to obtain an EA for the development and expansion of: (i) Activity 11 or 47 of Listing Notice 1; or (ii) Activity 9 of Listing Notice 2, in areas of “low” or “medium” environmental sensitivity.
Amendment of the Identification in terms of Section 24(5)(a) and (b) of NEMA of the Procedure to be Followed in Applying for EA for Large Scale Electricity Transmission and Distribution Development Activities Identified in terms of Section 24(2)(a) of NEMA when occurring in Geographical Areas of Strategic Importance (GN. 2716 in GG 47448 of 4 November 2022). Reduction in decision-making timeframes to 57 days for listed activities 11 of LN 1 and 9 of LN 2.
Identification of Geographical Areas Important for the Development of Strategic Gas Transmission Pipeline Infrastructure (GN. 143 in GG 44191 of 26 February 2021). Application for EA for gas transmission pipeline infrastructure which is located below ground, or above -ground for the purpose of connecting to above- ground infrastructure such as pigging stations or compressor stations, and the expansion of such facilities.
Procedures to be Followed when Applying for or Deciding on an EA for the Development or Expansion of Gas Transmission Pipeline Infrastructure when occurring in Strategic Gas Pipeline Corridors (GN. 411 in GG 44551 of 7 May 2021). Application for EA for activities where the activity is constructed below ground, or above-ground for the purpose of connecting to above-ground infrastructure such as pigging stations or compressor stations, including any associated activities necessary for the realisation of such infrastructure, where the greater part of the activity is undertaken within a Strategic Gas Pipeline Corridor; basic assessment process to be followed; reduction in decision-making timeframes to 57 days.
Generic EMPr for the Development and Expansion of Substation Infrastructure for Transmission and Distribution of Electricity and the Generic EMPr for the Development and Expansion of Overhead Electricity Transmission and Distribution Infrastructure (GN. 435 in GG 42323 of 22 March 2019).
Identification of a Generic Environmental Management Programme Relevant to an Application for EA for the Development or Expansion of Gas Transmission Pipeline Infrastructure (GN. 373 in GG 44481 of 23 April 2021). A generic EMPr for Gas Transmission Pipeline Infrastructure relevant to an application for EA for gas transmission pipeline infrastructure which is located below ground, or above-ground for the

purpose of connecting to above-ground infrastructure such as pigging stations or compressor stations, and the expansion of such facilities.

**ANNEXURE D – ECONOMIC DEVELOPMENT SUPPORTING
INFORMATION**



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23

FEASIBILITY STUDY

Annexure D – Economic Development Supporting Information

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

	Version	Date Issued
V0.1	First Draft Issued	3 May 2024
V0.2	Draft 2 issued incorporating comments received up to 31 May 2024	31 May 2024
V.F	Final Draft	27 June 2024

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ANNEXURE D – ECONOMIC DEVELOPMENT SUPPORTING INFORMATION

This Annexure D – Economic Development Supporting Information forms part of the feasibility study report for the Stellenbosch Municipal Independent Power Producer Procurement Programme and provides further detail for the Economic Development subsection.

1.1 MER PROGRAMME REPORT ECONOMIC DEVELOPMENT RECOMMENDATIONS

The MER Initiative EPR analysed three options for integrating economic development aspects into the procurement processes of the Project. These three options were:

- **Option 1:** Applying the PPPFA (90/10) and existing Local Content designations as the minimum applicable Economic Development requirement.
- **Option 2:** Applying the PPPFA (90/10) with existing Local Content designations and apply for additional Local Content designations (Non-Designated Local Content).
- **Option 3:** Applying for exemption from the provisions of the PPPFA and pursue Economic Development including Local Content, Local Economic Development and B-BBEE.

These options were evaluated based on their potential impact on procurement time (PT), project price (PP), project risk (PR), and the resulting economic development benefits. The assessment is summarised in **Table 0-1** below.

Table 0-1 Summary of MER Programme Report ED option analysis¹

Option	Description	Impacts	
Option 1	The PPPFA applies in terms of 90/10 or 80/20 with 10 or 20 points allocated to B-BBEE Status Level, as well as applying the legislated designations for Local Content. Stellenbosch may also apply pre-qualifying criteria, including: <ul style="list-style-type: none"> • a stipulated minimum B-BBEE status level 	PT:	Quick procurement process.
		PP:	Limited.
		PR:	Limited.

¹ Source: Adapted from Western Cape Government (2021)

Option	Description	Impacts	
	<ul style="list-style-type: none"> the tenderer being an EME or QSE the tenderer subcontracting a minimum of 30% to designated groups. 	ED:	Induced economic development benefit due to the requirement of minimum B-BBEE level.
Option 2	The PPPFA and Local Content Designations apply as per ED Initiative 1. Furthermore, Stellenbosch seeks to apply a Non-Designated Local Content Threshold on goods and services that have not been designated but have the potential for Local Content.	PT:	Approximately 3 to 6 months longer than Option 1.
		PP:	Negative due to higher costs of locally manufactured components and need to conduct market analysis for Non-Designated LC.
		PR:	Low-to-limited.
		ED:	Similar to Option 1, with the added benefit of higher LC, which may potentially have a positive impact on the local economy and employment.
Option 3	Stellenbosch applies for Exemption from the provisions of B-BBEE as a scoring mechanism to the PPPFA to pursue Economic Development objectives through Local Content, Local Economic Development and B-BBEE. Economic Development becomes a qualification and an evaluation criterion.	PT:	Approximately 3.5 to 8.5 months longer than Option 1.
		PP:	Negative due to higher costs of locally manufactured components or preferentially procured goods, LED spend, need to conduct market analysis for Non-Designated LC and economic development M&E requirements.
		PR:	Moderate.
		ED:	Similar to Option 2, with the added benefit of setting forward-looking economic development commitments and thresholds.

The MER Initiative EPR recommended Option 1 for incorporating economic development in the Project. However, this recommendation assumed the application of pre-qualifying criteria, specifically a minimum Level 4 B-BBEE contributor status level, to attain the necessary economic development benefit within Option 1.

Significant changes in preferential procurement regulations have occurred since the release of the MER Initiative EPR in 2021. The introduction of the PPR 2022 has altered the

landscape, rendering government entities unable to employ economic development pre-qualifying criteria, as previously assumed in the analysis.²

This development underscores the need for a re-evaluation of the most appropriate options for integrating economic development criteria and achieving economic benefits. Further investigation is imperative to identify and select the optimal option or combination of options that align with the current regulatory framework.

1.2 OVERVIEW OF ORGANS OF STATE PREFERENTIAL PROCUREMENT TENDER REQUIREMENTS

The following table provides a comparison of various organs of state's approaches to preferential procurement following the implementation of the PPR 2022.

Table 0-2 Comparison of organs of state preferential procurement tender requirements

ORGAN OF STATE	SPECIFIC GOALS	NUMBER OF POINTS (90/10) or (80/20)	POINT ALLOCATIONS	EVIDENCE
KNYSNA LOCAL MUNICIPALITY (Tender No: T26 of 2023/24)	B-BBEE status level of contribution	10/20	Level 1: 10/20 Level 2: 8/19 Level 3: 6/16 Level 4: 5/12 Level 5: 4/8 Level 6: 3/6 Level 7: 2/4 Level 8: 1/2 Non-Compliant: 0	B-BBEE Certificate
CITY OF CAPE TOWN METROPOLITAN MUNICIPALITY	HISTORICALLY DISADVANTAGED PERSONS GOALS			
	Gender (women ownership)	3	>75% - 100 %: 3 >50% - 75%: 2 >25% - 50%: 1.5 >0% - 25%: 0.5 0%: 0	B-BBEE Certificate Company registration certificate

² Further detail on changes to preferential procurement in South Africa are provided in the following subsection.

ORGAN OF STATE	SPECIFIC GOALS	NUMBER OF POINTS (90/10) or (80/20)	POINT ALLOCATIONS	EVIDENCE
(Tender No: 131S/2023/24)	Race (black ownership)	3	> 75% - 100 %: 3 > 50% - 75%: 2 > 25% - 50%: 1.5 > 0% - 25%: 0.5 0%: 0	Central supplier database report
	Disability (ownership by WHO disability guideline)	1	> 2% +: 1 > 0% - 2%: 0.5 0%: 0	Proof of disability Company registration certification
	RECONSTRUCTION AND DEVELOPMENT PROGRAMME GOALS			
	Promotion of SMME's	3	SMME partnership, sub-contracting, joint venture or consortiums	B-BBEE Status Level South African owned Financial Statements
INDUSTRIAL DEVELOPMENT CORPORATION (Tender No: T04/01/24)	HISTORICALLY DISADVANTAGED PERSONS GOALS			
	Black Ownership	10	100%: 5 51%- 99%: 4	B-BBEE Certificate / Sworn Affidavit B-BBEE improvement plan (including how Ownership, Management Control, Employment Equity, Preferential Procurement, Enterprise Development will be maintained and improved)
	30% Black Women Ownership	5	30%: 5 < 30%: 0	
	Any % ownership by Black Designated Groups	2	>0%- 2%: 2	
	RECONSTRUCTION AND DEVELOPMENT PROGRAMME GOALS			

ORGAN OF STATE	SPECIFIC GOALS	NUMBER OF POINTS (90/10) or (80/20)	POINT ALLOCATIONS	EVIDENCE
	Promotion of SMMEs (EME or QSE)	3	-	Partnership / Subcontracting proposal B-BBEE Scorecard / Sworn Affidavit

1.3 GEOGRAPHICAL DISTRIBUTION OF WESTERN CAPE REIPPPP PROJECTS

Figure 0-1 illustrates the geographical distribution of operational REIPPPP projects within the Western Cape region. Notably, all these projects emerged from the initial four bid windows of the REIPPPP.

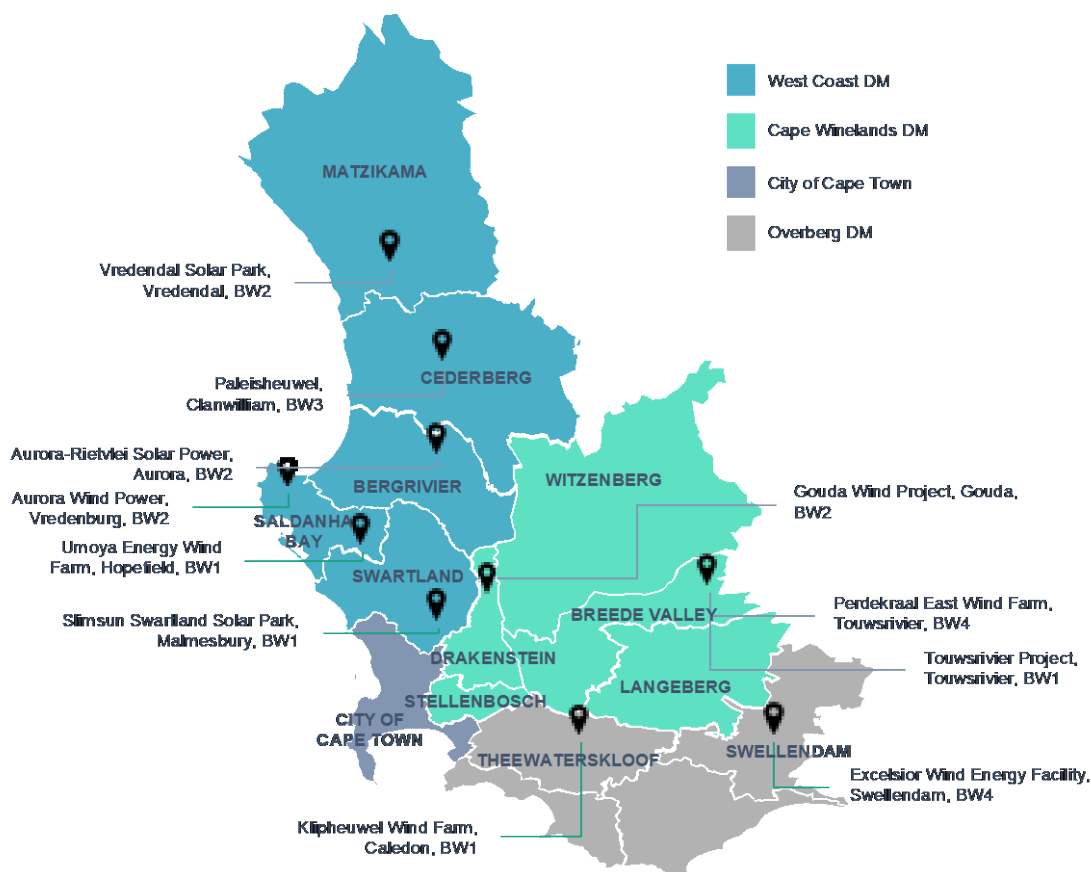


Figure 0-1 Operational REIPPP project in Western Cape Map³

1.4 EVOLUTION OF ED CRITERIA IN THE REIPPPP

The REIPPPP Economic Development evaluation criteria encompass various elements, including job creation, local content, ownership, management control, preferential procurement, enterprise development, and socio-economic development. The weightings of these elements are provided in Figure 0-2.

³ Adapted from DMRE (2024)

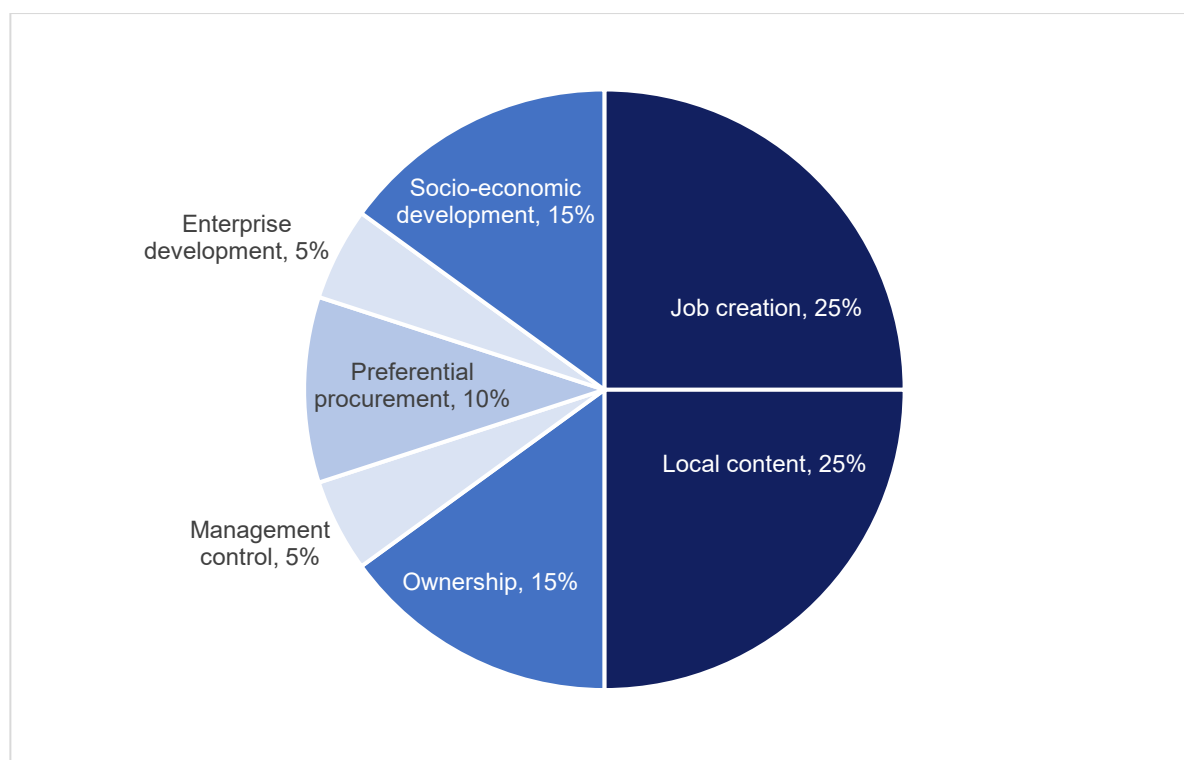


Figure 0-2 REIPPPP Economic Development Criteria elements and weightings

Each of these elements comprises sub-elements, many of which had minimum thresholds for compliance (until Bid Window 5). These commitments were in addition to key qualification requirements, such as a 40% South African Entity Participation in the Project Company and a Level 5 B-BBEE Contributor Status Level.⁴ Note, these qualification requirements have changed over each bidding round.

Table 0-3 below summarises the thresholds and targets of the various Economic Development elements and sub-elements in Bid Window 4.

Table 0-3 REIPPPP ED Criteria elements' thresholds and targets as of Bid Window 4⁵

Element	Description	Threshold	Target
Job creation	RSA Based employees who are citizens	50%	80%
	RSA Based employees who are Black people	30%	50%
	Skilled employees who are Black people	18%	30%

⁴ These requirements are as of Bid Window 4 and have evolved in subsequent Bid Windows.

⁵ Source: Adapted from Eberhard and Naude (2017).

Element	Description	Threshold	Target
	RSA based employees who are citizens and from local communities	12%	20%
	RSA based citizens employees per MW of Contracted capacity	N/A	N/A
Local content	Value of local content spending	45% ⁶	65%
Ownership	Shareholding by Black People in the Seller	12%	30%
	Shareholding by Local Communities in the Seller	2.5%	5%
	Shareholding by Black people in the Construction Contractor	8%	20%
	Shareholding by Black people in the Operations Contractor	8%	20%
Management control	Black people in Top Management	-	40%
Preferential procurement	B-BBEE Procurement ⁷	-	60%
	QSE & SME Procurement ^{Error! Bookmark not defined.}	-	10%
	Women Owned Vendor Procurement ^{Error! Bookmark not defined.}	-	5%
Enterprise development	Enterprise Development Contributions ⁸	-	0.6%
Socio-economic development	Socio-economic Development Contributions ^{Error! Bookmark not defined.}	1%	1.5%

Given the stringent Economic Development requirements of the REIPPPP, communities in the Western Cape have developed expectations regarding the economic benefits associated with IPP projects in their vicinity. It's crucial to note that communities may not distinguish between REIPPPP and non-REIPPPP projects, expecting similar levels of benefit regardless.

This context is pertinent for the Project which, if opting to exclude or scale back on Economic Development elements present in the REIPPPP, risks community dissatisfaction and unrest. Such unrest could lead to project implementation delays, posing significant challenges for stakeholders involved.

⁶ For Solar PV.

⁷ As a percentage of total procurement spend.

⁸ As a percentage of revenue.

In addition to the 11 operational REIPPPP projects, there are currently five projects under construction in the Western Cape, originating from Bid Window 5.

Table 0-4 REIPPPP projects under construction in the Western Cape⁹

Project	Technology	Capacity
Brandvalley Wind Farm	Onshore Wind	140 MW
Grootfontein PV 1	Photovoltaic Crystalline – Single Axis	75 MW
Grootfontein PV 2	Photovoltaic Crystalline – Single Axis	75 MW
Grootfontein PV 3	Photovoltaic Crystalline – Single Axis	75 MW
Rietkloof Wind Farm	Onshore Wind	140 MW

After Bid Window 4, the DMRE was no longer granted exemption from the PPPFA by the National Treasury, prompting a decrease in the weighting of Economic Development considerations in bid evaluation from 30 points to 10 points out of 100. However, despite this termination of the PPPFA exemption, the DMRE maintained and extended the extensive suite of Economic Development requirements for bid responses, including higher minimum thresholds for Economic Development elements for qualifying bids and increasing the South African Entity Participation requirement from 40% to 49%.¹⁰ Furthermore, it is worth noting that the Implementation Agreement for Bid Window 5 introduced a new provision (maintained in subsequent rounds) which gives the Regulator the option to request a diversion of an IPP's socio-economic development funds to nominated initiatives.

Bid Window 6 largely mirrored the Economic Development requirements established in the preceding bid round. However, Bid Window 7 eliminated minimum thresholds for Economic Development, in light of PPR 2022. The qualifying requirement of 49% South African Entity Participation was maintained, but it is unclear under what legislative or regulatory basis. Bidders now make voluntary commitments on the Economic Development elements for which they are willing and able, in pursuit of achieving a competitive advantage over other bidders on the 10 bid evaluation points allocated to Economic Development.

⁹ Adapted from DMRE (2024).

¹⁰ See Annexure D for a comparison of the minimum thresholds.

1.5 COMPARISON OF REIPPPP MINIMUM ED THRESHOLDS

The following table provides a comparison of the minimum ED thresholds in Bid Window 4 and Bid Window 5 of the REIPPPP.

Table 0-5 REIPPPP ED Criteria elements' thresholds and targets as of Bid Window 4¹¹

Element	Description	Threshold BW 4	Threshold BW 5
Job creation	RSA Based Employees who are Citizens	50%	65%
	RSA Based Employees who are Black People	30%	40%
	RSA Based Skilled Employees who are Black People	18%	20%
	RSA Based Employees who are Black People with specialized skills (e.g. engineering, artisanal skills, etc.)	-	10%
	RSA Based employees who are Citizens from Local Communities	12%	20%
	RSA Based Employees who are Black Youth	-	30%
	RSA Based Employees who are Black Women	-	10%
	RSA Based Employees who are People with Disabilities	-	0%
Local content	Value of Local Content Spending	45% ¹²	45% ¹²

¹¹ Source: Adapted from Eberhard and Naude (2017) and DMRE (2021).

¹² For Solar PV.

Element	Description	Threshold BW 4	Threshold BW 5
Ownership	Shareholding by Black People in the Seller	12%	30%
	Shareholding by Local Communities in the Seller	2.5%	2.5%
	Shareholding by Black Women in the Seller	-	5%
	Shareholding by Black People in the Construction Contractor	8%	25%
	Shareholding by Black People in the Operations Contractor	8%	25%
	Shareholding by Black Women in the Construction Contractor	-	5%
	Shareholding by Black Women in the Operations Contractor	-	5%
Management control	Black Board Directors	-	25%
	Black Executive Management	-	30%
	Black Senior Management	-	30%
	Black Women Board Directors	-	8%
	Black Women in Executive Management	-	8%
	Black Women in Senior Management	-	8%

Element	Description	Threshold BW 4	Threshold BW 5
Skills Development	Skills Development Contributions ¹³	-	0.05%
	Bursaries for Black Students at Higher Education Institutions ¹³	-	0.05%
	Skills Development Contributions towards Black Disabled Employees ¹³	-	0.005%
Preferential procurement	B-BBEE Procurement ¹⁴	-	30%
	Black Enterprise Procurement ¹⁴	-	10%
	B-BBEE Procurement Spend on QSEs and EMEs ¹⁴	-	5%
	B-BBEE Procurement Spend on Black Women Owned Vendors ¹⁴	-	3%
Supplier Development	Supplier Development Contributions during the Construction Measurement Period ¹⁵	-	0.1%
	Supplier Development Contributions during the Operating Measurement Period ¹⁵	-	0.1%
Enterprise development	Enterprise Development Contributions ¹⁶	-	0.6%

¹³ As a percentage of revenue.

¹⁴ As a percentage of total procurement spend.

¹⁵ As a percentage of total project value.

¹⁶ As a percentage of revenue.

Element	Description	Threshold BW 4	Threshold BW 5
Socio-economic development	Socio-economic Development Contributions ¹⁶	1%	1.1%

1.6 PREFERENTIAL PROCUREMENT MECHANISMS IN THE PPB 2023

Chapter 4 of the PPB details mechanisms to be used in the application of preferential procurement, including set-asides, pre-qualification criteria, subcontracting, and local production and content. These are summarised below.

Table 0-6 Preferential Procurement Mechanisms provided in the PPB 2023

Mechanism	Application
Set-asides	Procuring institutions are required to set aside certain bids for certain categories of persons, such as black people, black women, people with disabilities, and small enterprises within a particular geographical area. The Minister of Finance is responsible for setting targets for set-aside. These set-aside targets will be reviewed at least every two years.
Prequalification criteria	Procuring institutions are obliged to apply prequalification criteria to certain bids to promote preferences in the allocation of contracts. Advertised bids must include specific bid conditions, such as minimum B-BBEE levels or minimum subcontracting requirements to small enterprises owned by target groups. The procuring institution is responsible for conducting market research to identify procurement opportunities to which prequalification criteria may be applied. However, prequalification criteria may only be applied if there are a prescribed minimum number of bidders to ensure competition.
Subcontracting	Where feasible, procuring institutions are required to subcontract contracts above a certain amount to advance persons or categories of persons. Subcontracting will apply to categories such as small enterprises, small enterprises which are owned by black people, or small enterprises which are owned by black people living in a particular geographical area, amongst others.

Mechanism	Application
Local production and content	In accordance with minimum thresholds for local production and content set by the Minister of the Department of Trade Industry and Competition (“dtic”), procuring institutions are required to advertise bids with the specific condition that only locally produced goods or locally manufactured goods that meet these minimum thresholds will be considered.

1.7 OVERVIEW OF REGIONAL ED PRIORITIES

Table 0-7 below summarises areas prioritised by the Municipality, Cape Winelands District and WCG in key planning documents.

Table 0-7 Areas of priority in Stellenbosch Local Municipality, Cape Winelands DM and WCG

Planning document	Prioritised areas
Stellenbosch Municipality IDP 2022 – 2027/ Stellenbosch Municipality Top Layer Service Delivery and Budget Implementation Plan (SDBIP) 2023/24	<ul style="list-style-type: none"> • Create an environment conducive to business development and job creation. • Facilitate and coordinate support to emerging entrepreneurs by utilising internal SCM processes and linking SMMEs with opportunities in the market. • Provide, upgrade and maintain an effective engineering infrastructure to support effective service delivery. • Develop and maintain sustainable human settlements that will deliver in the diverse range of housing needs. • Develop and implement a social infrastructure master plan for the upgrading and maintenance of social facilities in all wards.
Stellenbosch Municipality Economic Development Strategy and Implementation Plan (2022)	<ul style="list-style-type: none"> • Facilitate development of informal enterprises • Broaden job opportunities and alleviate poverty (through the Expanded Public Works Programme (EPWP)) • Utilise external relations to attract investment and promote catalytic growth sectors (including the promotion of Stellenbosch based businesses) • Develop and implement a comprehensive green economy program • Promote and implement water resilience (including a consumer education program) • Promote and implement energy resilience through the energy diversification and energy efficiency programs

Planning document	Prioritised areas
Stellenbosch Municipality Spatial Development Framework (SDF) (2019)	<ul style="list-style-type: none"> • Maintain and grow the assets of Stellenbosch's natural environment and farming areas • Direct growth to areas of lesser natural and cultural significance as well as movement opportunity • Ensure balanced, sustainable communities
Cape Winelands District Municipality (CWDM) 2022 – 2027	<ul style="list-style-type: none"> • Create an environment and forging partnerships that ensure social and economic development of all communities, including the empowerment of the poor in the Cape Winelands District. • Promoting sustainable infrastructure services and a transport system which fosters social and economic opportunities.
Western Cape Government Provincial Strategic Plan 2019 - 2024	<ul style="list-style-type: none"> • Strengthening youth-at-risk referral pathways and child and family-centred initiatives to reduce violence • Attracting investment through capacity building of local suppliers and labour (supplier development programmes, skills training programmes, etc.) • Growing the economy through export growth, focusing on improving the productivity of local businesses • Creating opportunities for job creation through skills development, including youth-centric development programmes and artisan training

ANNEXURE E – PROJECT PROGRAMME

ANNEXURE F – TECHNICAL MODELS - Refer Excel Models

ANNEXURE G – FINANCIAL MODELS



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23

FEASIBILITY STUDY

Annexure G – Financial Models

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

	Version	Date Issued
V0.1	V0.1 First Draft Issued	31 May 2024
V0.2	V0.2 Macro economic assumptions added	14 June 2024
V.F	Final Draft	27 June 2024

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1. IPP TARIFF CALCULATION MODEL



MUNICIPAL ENERGY RESILIENCE PROJECT IN THE WESTERN CAPE

Indicative Price Model Stellenbosch PV

Created by



in association with

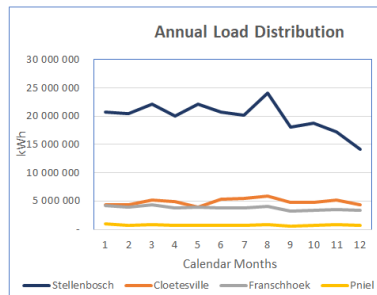


DISCLAIMER

This Financial Model has been prepared by J Maynard South Africa (Pty) Ltd ("J Maynard") based on the input assumptions of the Project Development Team. The purpose of this version of the Financial Model is to calculate the indicative price per technology and assist in calculate the new price on the current cost of supply when adding different technologies.

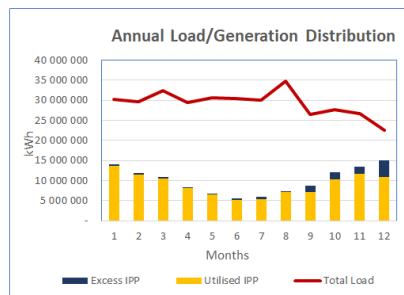
The Financial Model has not been audited. No representation, warranty, or undertaking (express or implied) is made and no responsibility is taken or accepted by J Maynard and their directors, officers, employees, agents or advisors ("the Financial Advisor") as to the adequacy, accuracy, completeness or reasonableness of the Financial Model and the Financial Advisor excludes all liability thereof. In particular, no responsibility is taken or accepted by the Financial Advisor and all liability is excluded by the Financial Advisor for the accuracy of the computations comprised therein and the assumptions upon which such computations are based. In addition, the recipient receives and uses this file entirely at its own risk and no responsibility is taken or accepted by the Financial Advisor and accordingly all liability is excluded by the Financial Advisor for any losses which may result therefrom, whether as a

2. COST OF SUPPLY CALCULATION MODEL



	Utility Before IPP Intervention		
	(ZAR)	(kWh)	(ZAR/kWh)
Stellenbosch	467 816 855	238 869 288	1,96
Cloeteville	117 839 129	58 117 278	2,03
Franschhoek	87 128 452	45 123 308	1,93
Pniel	21 769 740	9 101 325	2,39
	694 554 176	351 211 197	1,98

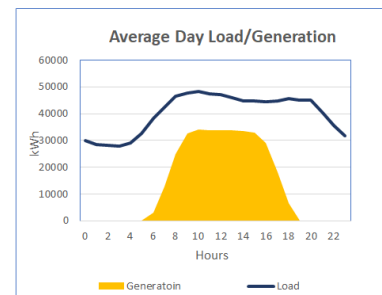
	IPP Cost (Excess)		
	(ZAR)	(kWh)	(ZAR/kWh)
Stellenbosch	7 488 210	7 882 326	0,95
Cloeteville	1 905 234	2 005 509	0,95
Franschhoek	1 723 227	1 813 923	0,95
Pniel	315 702	332 318	0,95
	11 432 373	12 034 077	0,95



	IPP Cost		
	(ZAR)	(kWh)	(ZAR/kWh)
Stellenbosch	74 877 427	78 818 344	0,95
Cloeteville	19 052 103	20 054 846	0,95
Franschhoek	17 232 118	18 139 071	0,95
Pniel	3 156 999	3 323 157	0,95
	114 318 647	120 335 418	0,95

Excess Energy

	Wheeling Credit		
	(ZAR)	(kWh)	(ZAR/kWh)
0 Stellenbosch	-	-	-
0 Cloeteville	-	-	-
0 Franschhoek	-	-	-
0 Pniel	-	-	-
	-	-	-



	Utility After IPP Intervention		
	(ZAR)	(kWh)	(ZAR/kWh)
Stellenbosch	349 411 103	167 933 270	2,08
Cloeteville	88 106 385	40 067 941	2,20
Franschhoek	60 172 502	28 798 160	2,09
Pniel	16 823 475	6 110 486	2,75
	514 513 465	242 909 856	2,12

RE Penetration

	Total Cost After IPP Intervention		
	(ZAR)	(kWh)	(ZAR/kWh)
Stellenbosch	424 288 530	238 869 288	1,78
Cloeteville	107 158 488	58 117 278	1,84
Franschhoek	77 404 620	45 123 308	1,72
Pniel	19 980 474	9 101 325	2,20
	628 832 112	351 211 197	1,79

Total Cost Saving / (Loss)	9,46%
Unit Cost of Supply Savings / (Loss)	9,46%

INPUTS

1 General

Names

Client Name

Model Name

Currency

Currency Factor

Model Currency

Name

Name

Choose

Num#

Num#

Stellenbosch Muni

Cost of Supply Calc

ZAR

1 000 000

(1 000 or 1 000 000)

ZAR mil

Constants

Hours per Year

Days in Year

Months per Year

Num#

Num#

Num#

8 760

365

12

Hundred

Thousand

Million

Very Small Number

Num#

Num#

Num#

Num#

100

1 000

1 000 000

0.00000010

Dates

Evaluation Period Start Date

01-Jan-24

2 Tariff/Cost Profiles

Tariff Attributes		Structure 1		Structure 2		Structure 3		Structure 4	
Tariff Type		MegaFlex		MegaFlex		MuniFlex			
Munic or Non Munic		Local Authority		Local Authority		Local Authority			
Voltage		≥ 66kV & ≤ 132kV		≥ 500V & ≤ 66kV		≥ 66kV & ≤ 132kV			
Transmission zone		> 900km		> 900km		> 900km			
Customer segmentize		Key customers		> 1 MVA		Key customers			
Urban or Rural		Urban		Urban		Urban			

Tariff Components		Structure 1		Structure 2		Structure 3		Structure 4		Structure 1	Structure 2	Structure 3	Structure 4
Low Season Peak Energy Charge	ZAR / kWh	1.80	1.88	Yes	1.7%	1.83	Yes	Yes	Yes	2.03	2.10	2.07	-
Low Season Standard Energy Charge	ZAR / kWh	1.24	1.28	Yes	-16.9%	1.03	Yes	Yes	Yes	1.40	1.44	1.16	-
Low Season Offpeak Energy Charge	ZAR / kWh	0.79	0.81	Yes	-6.4%	0.74	Yes	Yes	Yes	0.89	0.92	0.83	-
High Season Peak Energy Charge	ZAR / kWh	5.52	5.70	Yes	-20.1%	4.42	Yes	Yes	Yes	6.23	6.43	4.98	-
High Season Standard Energy Charge	ZAR / kWh	1.67	1.73	Yes	-34.0%	1.10	Yes	Yes	Yes	1.89	1.95	1.24	-
High Season Offpeak Energy Charge	ZAR / kWh	0.91	0.94	Yes	-19.0%	0.74	Yes	Yes	Yes	1.02	1.06	0.83	-
Transmission network charges	ZAR / kWh (MMD)	14.24	14.72	Yes	-27.3%	10.35	Yes	Yes	Yes	16.05	16.59	11.67	-
Generation Capacity Charge	ZAR / kWh (MMD)			No		81.71	Yes	No	No	0.00	-	92.11	-
Network capacity charge	ZAR / kWh (MMD)	10.25	28.05	Yes	87.0%	19.17	Yes	Yes	Yes	11.55	32.29	21.61	-
Network demand charge	ZAR / kWh (MMD)	18.96	54.31	Yes	-7.2%	17.59	Yes	Yes	Yes	21.37	61.22	19.82	-
Urban low voltage subsidy charge	ZAR / kWh (MMD)	25.10	0.00	No	-65.1%	8.77	Yes	Yes	Yes	28.29	-	9.88	-
Ancillary service charge	ZAR / kWh	0.01	0.01	Yes	-50.0%	0.00	Yes	Yes	Yes	0.01	0.01	0.00	-
Service charge	ZAR/account/day	6 994.19	356.92	Yes	-100.0%		No	Yes	Yes	7883.85	402.32	-	-
Service charge	ZAR/POD/day			No		1 053.44	No	Yes	Yes	0.00	-	1 187.44	-
Administration charge	ZAR/POD/day	223.36	100.88	Yes	-88.5%	25.61	Yes	Yes	Yes	251.77	181.34	26.87	-
Electrification and rural network subsidy charge	ZAR / kWh	0.14	0.14	Yes	-31.1%	0.10	Yes	Yes	Yes	0.16	0.16	0.11	-
Affordability subsidy charge	ZAR / kWh			No			No	No	No	0.00	-	-	-
High season Reactive energy charge	ZAR / kWh	0.25	0.25	Yes	2.1%	0.26	Yes	Yes	Yes	0.00	0.28	0.29	-

Added Margin	%		25%						
--------------	---	--	-----	--	--	--	--	--	--

3 High Season and TOU

TOU Structure

Choose

Current

	Month	HighSeason	onrh Num#
1	Jan	0	0
2	Feb	0	0
3	Mar	0	0
4	Apr	0	0
5	May	0	0
6	Jun	1	6
7	Jul	1	7
8	Aug	1	8
9	Sep	0	0
10	Oct	0	0
11	Nov	0	0
12	Dec	0	0

Current TOU						
Low Season			High Season			
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
0	3	3	3	0	3	3
1	3	3	3	1	3	3
2	3	3	3	2	3	3
3	3	3	3	3	3	3
4	3	3	3	4	3	3
5	3	3	3	5	3	3
6	2	3	3	6	3	3
7	1	2	3	7	1	2
8	1	2	3	8	1	2
9	1	2	3	9	2	2
10	2	2	3	10	2	2
11	2	2	3	11	2	2
12	2	3	3	12	2	3
13	2	3	3	13	2	3
14	2	3	3	14	2	3
15	2	3	3	15	2	3
16	2	3	3	16	2	3
17	2	3	3	17	1	2
18	1	2	3	18	1	2
19	1	2	3	19	2	3
20	2	3	3	20	2	3
21	2	3	3	21	2	3
22	3	3	3	22	3	3
23	3	3	3	23	3	3

Proposed TOU						
Low Season			High Season			
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
0	3	3	3	0	3	3
1	3	3	3	1	3	3
2	3	3	3	2	3	3
3	3	3	3	3	3	3
4	3	3	3	4	3	3
5	3	3	3	5	3	3
6	2	3	3	6	3	3
7	1	2	3	7	1	2
8	1	2	3	8	2	2
9	2	2	3	9	2	2
10	2	2	3	10	2	2
11	2	2	3	11	2	2
12	2	3	3	12	2	3
13	2	3	3	13	2	3
14	2	3	3	14	2	3
15	2	3	3	15	2	3
16	2	3	3	16	2	3
17	2	3	3	17	1	2
18	1	2	3	18	1	2
19	1	2	3	19	2	3
20	1	3	3	20	2	3
21	2	3	3	21	2	3
22	3	3	3	22	3	3
23	3	3	3	23	3	3

Peak 1 Standard 2 Off-Peak 3

Load and Generation Profiles

Load Profiles				
	1	2	3	4
Source	Stellenbosch	Cloeteville	Franschhoek	Pniel
Load Name				
Max (kWh)	50 367	17 102	9 914	1 942
LF (%)	0.54	0.39	0.52	0.53
Total Annual (kWh)	238 869 288	58 117 278	45 123 308	9 101 325
Power Factor (%)	0.96	0.96	0.96	0.96
Points of Delivery	1.00	1.00	1.00	1.00
Accounts	1.00			
NMD (kVA)	60 000	16 000	10 000	9 000
Tariff Structure	Structure 1	Structure 1	Structure 1	Structure 1

60000 16000 10000 9000

				(kW per hour)			
2022/01/01 00:00	1	1	0	18 255	4 147	4 130	1 202
2022/01/01 01:00	1	1	1	17 997	3 819	3 903	1 153
2022/01/01 02:00	1	1	2	17 554	3 576	3 647	1 040
2022/01/01 03:00	1	1	3	17 443	3 451	3 603	962
2022/01/01 04:00	1	1	4	17 544	3 444	3 635	934
2022/01/01 05:00	1	1	5	17 659	3 463	3 765	962
2022/01/01 06:00	1	1	6	17 996	3 606	3 997	1 090
2022/01/01 07:00	1	1	7	18 797	4 079	4 484	1 117
2022/01/01 08:00	1	1	8	20 098	4 669	5 160	1 179
2022/01/01 09:00	1	1	9	21 189	5 447	5 815	1 244
2022/01/01 10:00	1	1	10	21 644	6 090	6 017	1 248
2022/01/01 11:00	1	1	11	21 958	6 372	6 056	1 156
2022/01/01 12:00	1	1	12	21 919	6 456	6 214	1 128
2022/01/01 13:00	1	1	13	20 557	6 322	5 848	1 098
2022/01/01 14:00	1	1	14	19 665	6 101	5 475	1 072
2022/01/01 15:00	1	1	15	19 236	5 793	5 175	1 108
2022/01/01 16:00	1	1	16	19 149	5 788	5 209	1 094
2022/01/01 17:00	1	1	17	19 050	5 658	5 153	1 418
2022/01/01 18:00	1	1	18	19 810	5 742	5 186	1 489
2022/01/01 19:00	1	1	19	20 312	5 882	5 375	1 551
2022/01/01 20:00	1	1	20	21 390	6 204	5 611	1 554
2022/01/01 21:00	1	1	21	20 894	5 755	5 267	1 550
2022/01/01 22:00	1	1	22	19 528	4 854	4 582	1 495
2022/01/01 23:00	1	1	23	18 382	4 049	3 899	1 323
2022/01/02 00:00	1	2	0	17 719	3 558	3 543	1 188
2022/01/02 01:00	1	2	1	17 391	3 227	3 351	1 110
2022/01/02 02:00	1	2	2	17 083	3 067	3 192	1 104
2022/01/02 03:00	1	2	3	17 108	3 066	3 239	1 089
2022/01/02 04:00	1	2	4	17 209	3 178	3 282	1 054
2022/01/02 05:00	1	2	5	17 256	3 324	3 522	1 097
2022/01/02 06:00	1	2	6	18 125	3 673	3 876	1 188
2022/01/02 07:00	1	2	7	19 445	4 361	4 514	1 152
2022/01/02 08:00	1	2	8	20 369	5 166	5 358	1 284
2022/01/02 09:00	1	2	9	21 432	6 073	5 952	1 321
2022/01/02 10:00	1	2	10	21 598	6 646	6 151	1 352
2022/01/02 11:00	1	2	11	21 068	6 817	6 229	1 270
2022/01/02 12:00	1	2	12	20 534	6 630	6 011	1 234
2022/01/02 13:00	1	2	13	19 825	6 143	5 751	1 208
2022/01/02 14:00	1	2	14	18 731	5 922	5 523	1 128

Generation Profiles				
	1	2	3	4
Source	Stellenbosch	Cloeteville	Franschhoek	Pniel
Generation Name				
RE Nameplate Capacity (kWdc)				
BESS Capacity (MW)				
BESS Capacity (MWh)				
Max Profile Capacity (kWac)	32 129	8 175	7 394	1 355
Capacity Factor	-	-	-	-
Tariff (R/kWh) (Peak)	0.95	0.95	0.95	0.95
Tariff (R/kWh) (Standard)	0.95	0.95	0.95	0.95
Tariff (R/kWh) (Off-Peak)	0.95	0.95	0.95	0.95
Total Annual Volume (kWh)	78 818 344	20 054 846	18 139 071	3 323 157
Wheeling (yes/no)	No			
Rural/Urban	Urban			
Supply voltage:	≥ 66kV & ≤ 132kV			
Transmission zone	> 900km			
Distribution Loss Factor	-	-	-	-
Transmission Loss Factor	-	-	-	-

(annual generation - kWh)				
27 735	-	-	-	-
26 871	-	-	-	-
25 817	-	-	-	-
25 459	-	-	-	-
25 557	-	-	-	-
25 848	-	-	-	-
26 689	-	-	-	-
28 476	305	78	70	13
31 106	897	228	206	38
33 694	1 520	387	350	64
34 998	2 093	533	492	86
35 542	5 404	1 375	1 244	228
35 717	2 798	712	644	118
33 624	25 013	6 364	5 757	1 055
32 312	28 561	7 267	6 573	1 204
31 312	30 280	7 705	6 969	1 277
31 240	29 235	7 439	6 728	1 233
31 279	9 307	2 368	2 142	392
32 227	150	38	34	6
33 120	-	-	-	-
34 759	-	-	-	-
33 465	-	-	-	-
30 459	-	-	-	-
27 653	-	-	-	-
26 007	-	-	-	-
25 079	-	-	-	-
24 445	-	-	-	-
24 501	-	-	-	-
24 723	-	-	-	-
25 198	-	-	-	-
26 862	10 482	2 667	2 412	442
29 472	27 797	7 073	6 397	1 172
32 177	31 203	7 939	7 181	1 316
34 777	30 892	7 860	7 110	1 302
35 746	30 618	7 790	7 046	1 291
35 385	22 334	5 683	5 140	942
34 409	21 888	5 569	5 037	923
32 926	21 518	5 475	4 952	907
31 305	21 234	5 403	4 887	895

3. MACRO-ECONOMIC ASSUMPTIONS

Variables	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
RSA CPI (%)	5,50%	5,15%	5,17%	5,20%	5,23%	5,25%	5,28%	5,30%	5,33%	5,36%	5,38%	5,41%	5,44%	5,46%	5,49%	5,52%	5,54%
Eskom (%)	12,72%	11,08%	9,97%	9,52%	6,44%	6,65%	5,28%	5,30%	5,33%	5,36%	5,38%	5,41%	5,44%	5,46%	5,49%	5,52%	5,54%
3-month Jibar (%)	8,19%	7,25%	7,27%	7,31%	7,35%	7,39%	7,42%	7,46%	7,50%	7,54%	7,57%	7,61%	7,65%	7,69%	7,72%	7,76%	7,80%

ANNEXURE H – RISK ALLOCATION PRINCIPLES



STELLENBOSCH MUNICIPAL INDEPENDENT POWER PRODUCER PROCUREMENT PIONEERING PROJECT – T008/23

FEASIBILITY STUDY

Annexure H – Risk Allocation Principles

V0.F

27 June 2024

Prepared by:

Cresco Advisory Consortium



REVISION HISTORY

Version	Description	Date Issued
V0.1	First Draft Issued	31 May 2024
V0.2	Small amendments made	14 June 2024
V.F	Final Draft	27 June 2024

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ANNEXURE A - STAKEHOLDER MANAGEMENT PLAN

ANNEXURE H – RISK ALLOCATION PRINCIPLES

This Annexure G – Risk Allocation Principles forms part of the feasibility study report for the Stellenbosch Municipal Independent Power Producer Procurement Programme and sets out the preliminary risk allocation principles applicable to the Project that informed the basis on which the pricing of projects has been estimated in the financial analysis. These principles will be developed in detail during the procurement phase.

Table 1-1 – Risk Allocation Principles

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
1	Land availability, access and site risk	The risk associated with (i) selecting and acquiring land suitable for the project; (ii) Heritage land rights; (iii) legal tenure and free of encumbrances; (iv) addressing land claims (if any); (v) obtaining necessary planning approvals; (vi) providing access to the site; (vii) site security; (viii) utilities and installations; and (ix) site and existing asset condition (if applicable).	<p>Site due diligence.</p> <p>Agreement of lease, option to lease or purchase to secure appropriate tenure.</p> <p>Identify all planning consents and ensure adequate provision is made in the construction programme for such consents to be obtained.</p> <p>Arrange for the security of the site to allow construction to take place in an unfettered manner.</p> <p>Arrange that all site utilities and installations are being performed in a timeous manner.</p>		✓	
2	Design risk	The risk that the project design is not suitable for the purpose required; approval of design; and changes.	<p>This risk is transferred in its entirety to the IPP.</p> <p>Comprehensive EPC contract transfer of the design risk by the IPP.</p> <p>Clear technical specifications set out in the EPC contract.</p> <p>Insurance (professional indemnity).</p> <p>Patent and latent defect liability in the EPC contract.</p> <p>Independent engineer appointment to resolve disputes on expedited basis.</p>		✓	
3	Construction risk	The risk that the completion of the construction may be (i) delayed so that the delivery of the energy (or capacity and energy) cannot commence on the	Comprehensive EPC contract prepared on a back-to-back basis with the construction, installation and commissioning obligations.		✓	

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
		commercial operation date, (ii) delayed, unless greater expenditure is incurred to keep to the commercial operation date due to factors under the control of the IPP, (iii) quality assurance and construction regulatory standards risk, (iv) the risk of loss or damage arising from latent defects in the construction, installation or commissioning of the plant, (v) health and safety compliance, (vi) liability for death, personal injury, property damage and third party liability, (vii) defects and defective material, intellectual property, (viii) interface risk and (viii) cost increases.	<p>Risk of engineering, procurement or construction of the plant is transferred by the IPP to the EPC contractor and the EPC contractor assumes liability for a reasonable period of time. Due diligence by the IPP. Regular reporting obligation to the IPP.</p> <p>The contract termination date is fixed and should the scheduled commercial operation date not be achieved the IPP will lose expected revenue due to the late commencement of the project. This may only be relaxed should a relief event, force majeure, compensation or MAGA (Material Adverse Government Action) events occur.</p> <p>IPP to appoint an experienced project manager to assist it to comply with contractual target dates.</p> <p>Insurance (project delay) and other construction business risk insurance.</p> <p>Appointment of an independent engineer to certify the completion of the Works and to resolve disputes on expedited basis.</p> <p>Liquidated damages provisions in PPA.</p> <p>Private party is to obtain all relevant licenses and all licenses must be transferable.</p> <p>Performance guarantee from the IPP to achieve completion, unless caused by the Municipality.</p> <p>Carrying out detailed feasibility studies.</p> <p>Municipality to implementing efficient and fair procurement process.</p>			

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
4	Construction risk	The risk to the Municipality that the completion of the construction may be (i) delayed so that the delivery of the energy (or capacity and energy) cannot commence on the commercial operation date, or (ii) delayed, unless greater expenditure is incurred to keep to the commercial operation date, due to (iii) delayed because of a breach caused by the Municipality, or failure to provide grid access date, or (iii) delayed because of a breach caused by the Municipality, or failure to provide grid access.	Carrying out detailed feasibility studies. Material breach by the Municipality, compensation event defined in the PPA with appropriate remedies.	✓		
5	Cost over-run risk	The risk that during the construction phase, the actual construction costs will exceed projected construction costs.	Comprehensive EPC contract based upon a fixed price, fixed date contract. Contingency provisions.		✓	
6	Environmental risk	The risk associated with pre-existing conditions; obtaining consents; compliance with laws; conditions caused by the project; external events; and climate change.	Due diligence by the IPP of the pre-existing project site conditions. Project site conditions risk transferred by the IPP to the EPC contractor during the construction phase. Independent surveys of the site commissioned by the IPP, at its cost. Environmental authorisation obtained by the IPP at its cost. Compliance with environmental management plan by the IPP throughout the contract period.		✓	
7	Operating risk	The risk of events (other than Force Majeure) impacting on the operating requirements of the project, including projected operating expenditure and skills requirements, for example, labour disputes, employee competence, employee fraud, resource availability, health and safety, technology failure, compliance with maintenance standards, performance environmental	Clear technical specifications by IPP. Penalty regime and performance monitoring. Secure the Project site. Comprehensive O&M contract (or long-term service agreement) drafted on a back-to-back basis with the		✓	

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
		incidents and any failure to obtain, industrial action, vandalism and maintain and comply with necessary operating licenses and consents as well as liability for death, personal injury, property damage and third party liability.	<p>operations and maintenance obligations under the PPA agreement.</p> <p>Alternately, if the IPP assumes the risk of operating and maintaining the plant, then IPP should have sufficient technical skills and the capacity to undertake manage and mitigate the risk of operating the plant.</p> <p>Rights of substitution in the event of performance failure by the O&M contractor.</p> <p>Direct Agreement.</p> <p>Performance guarantee from the O&M contractor.</p> <p>Insurance (assets all-risk insurance).</p> <p>Socio economic arrangements with adjacent neighbourhoods.</p>			
8	Maintenance risk	The risk that the cost of maintaining the plant in the required condition may vary from the projected maintenance costs, or	<p>Clear technical specifications.</p> <p>Penalty regime and performance monitoring.</p> <p>Comprehensive O&M contract prepared on a back-to-back basis with the operations and maintenance obligations under the PPA agreement.</p> <p>Substitution rights.</p> <p>Special insurance and special security in the form of maintenance bonds and/ or reserve accounts. This may especially be true for BESS.</p>		✓	
9	Variation risk	The risk of changes requested by the IPP to the service which affect construction or operation.	The IPP is to bear the risk and the associated costs if it requests a change during construction and operation.		✓	

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
10	Supply risk	The IPP will commit via the PPA to a certain energy generation profile over the term of the Project.	<p>Energy production level below the agreed levels will be a penalizable event and may in extreme conditions if not rectified lead to default, which may trigger termination by the Municipality.</p> <p>Rectification periods in the PPA are crucial as well as the balancing and escalation of penalty amounts.</p> <p>The Municipality may request certain performance guarantees and maintenance reserves to be implemented.</p> <p>The IPP and the Municipality must manage and monitor the PPA to identify challenges at an early stage.</p>		✓	
11	Demand risk	The risk that the demand for the energy generated and/or capacity available may be less than projected when the energy is produced.	<p>PPA on take or pay basis;</p> <p>The price or tariff must be payable for the provision of the electricity generation capacity being made available either through a take or pay mechanism or capacity payment.</p> <p>Arrangements may be made that the IPP can sell surplus power to other buyers.</p>	✓		
12	Strategic or partnering risk	The risk of the IPP not (i) being the right choice to deliver the project because of a failing business or insolvency; (ii) achieving its economic development commitments, (iii) being the right choice to deliver the project because of a failing sub-contractor or insolvency, change in IPP ownership and/or disputes.	<p>Appropriate functional criteria captured in the RFP to ensure a robust evaluation process.</p> <p>Pre-contract due diligence by Municipality on preferred Bidders.</p> <p>Penalty deductions for failure to achieve economic development commitments.</p> <p>SPV structure to ring-fence the Project cash flows.</p> <p>Security over necessary project assets.</p> <p>Limitations on debt and funding commitments of the IPP.</p> <p>Lenders will require reporting obligations in respect of financial information.</p> <p>Municipality has right to terminate the IPP agreement.</p>			✓

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
			<p>Substitution of IPP in terms of the direct agreement.</p> <p>Regulate change in IPP ownership through PPA contractual arrangements.</p> <p>Permitted Municipality step-in.</p> <p>Dispute resolutions provisions in the PPA.</p>			
13	Exchange rate risk	<p>The risk that exchange rate fluctuations will impact on the envisaged costs of imported inputs required for the project during the construction phase or the operations phase. Foreign exchange rate fluctuations can occur any time during the bidding, evaluation and adjudication, negotiation, commercial close, financial close, construction and operation phases of the Project.</p>	<p>Exchange rate risk is to be incurred by the IPP. The Municipality may consider whether foreign exchange rate risks will be carried by the Municipality from Bid Submission to commercial close by allowing the preferred bidders to adjust their price (upwards or downwards resulting from the movement) based on principles captured in the RFP. From financial close hedging instruments (e.g., forward foreign exchange contracts) can be implemented.</p> <p>A SPV structure is to be implemented and such SPV must have a South African bank account and all financing arrangements and PPA payments will be made in South African rand.</p> <p>In a 20-year PPA the BESS may have to be replaced, but IPPs can implement hedging instruments to reduce future exchange rate risks.</p>		✓	
14	Inflation risk	<p>The risk that the actual inflation rate will exceed the projected inflation rate.</p> <p>Given that the time span of the bidding, evaluation and adjudication, negotiation, commercial close, financial close and the construction phases is fairly short, and the EPC contract is typically a fixed price contract, this inflation risk will be more apparent during the operations phase.</p>	<p>The inflation risk is normally the risk of the IPP. Further, there is payments by the municipality to the IPP during the operational period. During the bidding, evaluation and adjudication, negotiation, commercial close, financial close and the construction phases CPI escalation is a pure IPP risk. Consideration will be given in the tariff design during the procurement process if provision should be made for alternate indexation</p>		✓	

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
15	Interest rate risk	The risk that the change in interest rates may increase the cost of borrowing. Interest rate changes can occur any time during the bidding, evaluation and adjudication, negotiation, commercial close, financial close, construction and operation phases of the Project.	<p>Consideration will be given whether interest rate risks will be carried by the Municipality from Bid Submission to Commercial Close.</p> <p>The IPP will typically bear the risk of interest rate fluctuations over the life of the operations phase of the Project. From financial Close hedging instruments (e.g., interest rate swaps and inflation-linked debt financing) may be arranged by the IPP. Hedging costs will be part of the contract price bid.</p>		✓	
16	Unavailability of insurance risk	The risk (i) that any insurance covers available upon signing the PPA become unavailable, or (ii) of substantial increases in the rates at which insurance premiums are calculated.	<p>Obligation to obtain insurances that the IPP must take out.</p> <p>The cost associated with the unavailability of insurance should become a shared risk from the point of its unavailability.</p> <p>Where cost of insurance increase significantly the risk is to be shared from the date when this matter becomes known to the parties.</p>		✓	
17	Refinancing risk	There are two key risks associated with refinancing (the changing or replacing of the existing terms on which the IPP's debt obligations have been incurred): (i) the risk that the Project will be unable to raise the required capital to refinance the Project at a given point in time; and (ii) the risk that a refinancing of debt will create additional Project risks (e.g. in terms of potential increased liabilities for the Municipality and increased financial instability of the IPP).	<p>In the main this is an IPP risk especially where it is to fund the operations of the IPP. The Municipality should specify in the PPA that its consent to refinance is required, and such clauses must be carefully drafted.</p> <p>However, refinancing may occur where the IPP wants to take advantage of better financing terms available in the market. The Municipality may want to share in such refinancing gains.</p>		✓	
18	Disruptive technology risk	The risk that a new emerging technology unexpectedly displaces an established technology, or the risk of obsolescence of equipment or materials used.	<p>The IPP's obligation is to meet the output specification.</p> <p>Since the BESS may be replaced during the term of the Project, it may be appropriate to agree a specific cost sharing mechanism under which the Municipality can request technical upgrades with appropriate cost sharing.</p>		✓	

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
19	Force majeure risk	The risk of occurrence of certain unexpected events that are beyond the control of the parties (whether natural or “man-made”), which may affect the project during the construction phase or the operations phase.	<p>Define “force majeure” narrowly to exclude risks that can be insured against and that are dealt with more adequately by other mechanisms such as system events and/or compensation events.</p> <p>Insurance (project delay, business interruption and/or assets all-risk insurance).</p> <p>Relief for IPP non-performance.</p> <p>Compensation events.</p> <p>Termination for force majeure.</p> <p>Termination calculation.</p>			✓
20	MAGA (Material Adverse Government Action) risk	The risk of actions within the Municipality’s responsibility having an adverse effect on the Project or the IPP.	<p>These events and remedies need to be clearly defined in the PPA agreement.</p> <p>The Municipality bears the risk of specific “political” actions having a material adverse effect on the IPP’s ability to perform its contractual obligations, or on its rights or financial status.</p> <p>A MAGA event is like force majeure, but the key difference is that the underlying principle behind MAGA relief is to put the IPP back into the position it would have been in had the MAGA event not occurred.</p> <p>Relief for IPP non-performance.</p> <p>Compensation events.</p> <p>Termination for MAGA.</p> <p>Termination calculation.</p>	✓		
21	Political risk	The risk of (i) unforeseeable conduct by any other government authority that materially and adversely affects the expected return on equity, debt service or otherwise results in increased costs to the IPP, or (ii) expropriation, nationalisation or privatisation	<p>These events and remedies need to be clearly defined in the PPA agreement.</p> <p>The Municipality bears the risk of specific “political” actions having a material adverse effect on the IPP’s</p>	✓		

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
		(collectively, “expropriating actions”) of the assets of the IPP.	<p>ability to perform its contractual obligations, or on its rights or financial status.</p> <p>A Political risk event is like force majeure, but the key difference is that the underlying principle behind MAGA relief is to put the IPP back into the position it would have been in had the MAGA event not occurred.</p> <p>Relief for IPP non-performance.</p> <p>Compensation events.</p> <p>Termination for political risk.</p> <p>Termination calculation.</p>			
22	Change in Law Risk	The risk of changes in law make compliance with applicable law difficult; and changes in law affecting performance of the Project or the IPP’s costs.	<p>The IPP have an obligation to comply with applicable law and will be in breach if it does not comply with applicable law, which is subject to change in law relief.</p> <p>The PPA must be clear what legislation and other mandatory regulations and industry codes the IPP is obliged to comply with.</p> <p>The PPA must determine legislation changes that are: (i) discriminatory to the Project or IPP, (ii) specific to the Project or to investors in such projects, or (iii) requiring capital expenditure after construction completion (i.e., in the operation period)</p>	✓		
23	Early termination risk	The risk of the Project being terminated before its natural expiry on various grounds; the financial consequences of such termination; and the strength of the Municipality’s payment covenant.	<p>The allocation of risk for early termination depends on the termination grounds and these also determine the financial consequences of termination.</p> <p>The Municipality bears the risk of Municipal breaches and to overcome or minimize this risk the Municipality should include grace periods in the PPA to be able to rectify breaches.</p> <p>Certain change in legislation events may lead to a termination of the PPA. Therefore, the PPA has to</p>	✓	✓	✓

No	CATEGORIES	DESCRIPTION	MITIGATION	MUNICIPALITY	IPP	SHARED
			<p>contain provisions to compensate the IPP fairly but also to derisk the situation for the Municipality as such events may be as a result of matters beyond its control.</p> <p>A voluntary termination by the Municipality is a risk that the Municipality should bear. However, the PPA should make provision for the calculation of the termination compensation.</p> <p>Force Majeure and Un-insurability termination are a shared risk and the PPA should make provision for the calculation of the termination compensation under such conditions.</p> <p>IPP termination</p> <p>Termination because of poor performance by the IPP needs to be defined. The PPA should provide for tolerance levels to provide the IPP an opportunity to rectify as termination is a last resort. In this instance the direct agreement may come into play. The compensation in such event needs to be stipulated and any shortfall must be at the risk of the IPP.</p>			

Source: The MER Business Case was utilised as basis and adjusted where relevant for the STMIPPPP.

ANNEXURE B



MIPPPP Definition of Abbreviations and Terms Used

Term	Meaning
2019 IRP	The currently operational IRP, published in 2019. IRP is National Equivalent to Municipal IDP
2023 draft IRP	A proposed Integrated Resource Plan, 2023
A	Amp (Electricity Current)
AC	Alternating Current. Same as power from house switched socket outlet
AFS	Annual Financial Statements
B-BBEE	Broad-Based Black Economic Empowerment
B-BBEE Act	Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003)
BEC	Bid Evaluation Committee
BESF	Battery Energy Storage Facility
BESS	Battery Energy Storage System
BSC	Bid Specification Committee
C&I	Commercial and Industrial
Carbon Tax Act	Carbon Tax Act, 2019 (Act No. 15 of 2019)
CBD	Central Business District
Circular No 118	National Treasury Circular No. 118, issued in terms of the MFMA, indicating how procurement with an IPP must take place
COD	Commercial Operation Date
COGTA	National Department of Co-Operative Governance and Traditional Affairs
CoLS	Cost of Loadshedding, an economic measure of the cost of loadshedding
Constitution	The Constitution of the Republic of South Africa, 1996. All legislation must align with the Constitution
COS Study	Cost of Supply Study. How much will it cost the customer if an IPP supplies electricity to Stellenbosch Municipality
COUE	Cost of Unserved Energy, an economic measure of the cost of unplanned electricity interruptions to electricity customers. How much does a municipality lose if it cannot supply electricity to the customers.
CPI	Consumer Price Inflation
CRSES	Centre for Renewable and Sustainable Energy Studies
CSIR	Council for Scientific and Industrial Research

Term	Meaning
DEDAT	Western Cape Government's Department of Economic Development and Tourism
Department/DI	Western Cape Government's Department of Infrastructure
DMRE	National Department of Mineral Resources and Energy. Now changed to DEE (Department of Electricity and Energy)
dtic	Department of Trade Industry and Competition
EAF	Energy Availability Factor. The time of available energy divided by the length of time looked at.
ED	Economic Development
EIMP	Updated Municipal Electricity Master Plan
EMEs	Emerging Micro Enterprises
EPR	Energy Projects Report 1 November 2021 (prepared as part of the WCG MER Initiative Phase 1)
ERA	Electricity Regulation Act, 2006 (Act No. 4 of 2006)
ERA Bill	Electricity Regulation Amendment Bill (B23-2023). Approved by NA and NCOP but not yet signed by the President
ERP	WCGs Energy Resilience Programme, a suite of projects being undertaken by various departments in the WCG
ESA	Electricity Supply Agreements. Agreements entered into between Stellenbosch and Franshoek Municipalities and Eskom, in 1995 and 2000 respectively.
G4J	Growth for Jobs
GCCA 2025	Generation Connection Capacity Assessment of the 2025 Transmission Network
GHG	Greenhouse Gases
GHG Emissions	Emission of greenhouse gases
GHI	Global Horizontal Irradiance, meaning the total solar radiation incident on a horizontal surface. How much energy can be mined from the sun at a particular site,
GWh	Gigawatt-hour (10^9) watt-hours
ICS	Inclusive Carbon Standard is a next-generation standard focusing on transparency and accountability of carbon projects
IDP	Stellenbosch Municipality Integrated Development Plan, 2022-2027
IGCAR	Interim Grid Capacity Allocation Rules - reflect the principles of non-discriminatory and open access to the grid
IPP	Independent Power Producer – Producer of electricity by a entity not owned by the distributor of electricity
IPS	Interconnected Power System

Term	Meaning
IRP	Integrated Resource Plan (National Electricity Equivalent to a Municipal IDP)
kW	kilowatt
kWh	Kilowatt hour (Unit of measuring electricity energy. All energy prices related to such a unit)
LC	Letter of Credit
LCOE	Levelised Cost of Electricity - a measure of the average net present cost of electricity generation for a generator over its lifetime
LNG	Liquefied Natural Gas – Gasses pressurised into liquids
Load Curtailment	Load reduction obtained from consumers who are able to reduce demand on instruction or through the application of load switching or load limiting
Loadshedding	Load reduction obtained by disconnecting load at selected points on the transmission or distribution system
Lyners	Neil Lyners & Associates (RF) (Pty) Ltd
MD	Maximum Demand, meaning the highest level of electrical power consumption during a specific period of time.
Megaflex	Means that ToU electricity tariff charged by Eskom to its urban customers with a notified maximum demand of greater than 1 MVA
MEnMP	Municipal Energy Master Plan
MER	Western Cape Municipal Energy Resilience (Program)
MFMA	Local Government: Municipal Finance Management Act, 2003 (Act No. 56 of 2003), as amended
Minister	Minister of Mineral Resources and Energy (in future it will be Minister of Electricity & Energy)
MIPPPP	Municipal Independent Power Producer Procurement Programme
MoU	Memorandum of Understanding – Documents signed by participating partners to ensure a common understanding
MSA	Municipal Systems Act: Local Government: Municipal Systems Act, No. 32 of 2000, as amended
MSCM Regulations	Municipal Supply Chain Management Regulations, 2005, issued in terms of the MFMA, as amended
MStrA	Municipal Structures Act: Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998), as amended
MunicFlex	Local-authority large power user tariffs, Megaflex, Miniflex, Nightsave Urban, Ruraflex, and Nightsave Rural to be combined into a new tariff called MunicFlex

Term	Meaning
Municipality	Stellenbosch Municipality
MV	Medium Voltage (in Stellenbosch's case 11 000V)
MVA	Megavolt-amperes (Mega = 1 000 000)
MW	Megawatt
MWh	Megawatt hour
MWp	Megawatt peak (peak electricity used within a month)
NCC	National Control Centre (Place where all the national network control takes place)
NDCs	Nationally Determined Contributions - commitments that countries make to reduce their greenhouse gas emissions as part of climate change mitigation
NECOM	National Energy Crisis Committee
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended
NERSA	National Energy Regulator of South Africa
NewGen Regs	Electricity Regulations on New Generation Capacity, 2011, issued in terms of the ERA, as amended
NMD	Notified Maximum Demand, meaning the maximum contractual electricity demand that a customer requests from a utility under its electricity supply agreement.
NPV	Net Present Value - the difference between the present value of cash inflows and the present value of cash outflows over a period of time.
NRS 048-9	Code of Practice – Load Reduction Practices, System Restoration Practices and Critical Load and Essential Load Requirements Under Power System Emergencies, Edition 3
NSP	Network Service Providers
POC	Point/s of Connection - a point (boundary of property) between the electrical installations of the distribution network and the connecting party
PoS	Point/s of Supply - means the point determined by the municipality at which electricity is supplied to any premises;
PPA	Power Purchase Agreement
PPB	Public Procurement Bill
PPB 2023	Public Procurement Bill 2023
PPP	Public Private Partnership - a commercial transaction between a municipality and a private party in terms of which the private party supplies a service

Term	Meaning
PPP Regulations	Municipal Public-Private Partnership Regulations, 2005, issued in terms of the MFMA, as amended
PPPFA	Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000), as amended
PPR	Pioneering Projects Roadmap – WCG plan to produce projects associated with nominated municipalities
PPR 2022	Preferential Procurement Regulations, 2022, as amended
President	President Cyril Ramaphosa
Province	Western Cape Province
PSC	Project Steering Committee
PSP	Western Cape Government's Provincial Strategic Plan, 2019 to 2024
PV	Photovoltaic means producing electricity from light
RDP	Reconstruction and Development Programme
RECs	Renewable Energy Certificates - market-based instrument that represents the property rights to the renewable energy supplied
REDZs	Renewable Energy Development Zones
Registration Procedure	Registration Procedure applied by NERSA for activities which are exempt from licensing requirements in terms of Schedule 2 of the ERA but still required to register with NERSA
REIPPPP	Renewable Energy Independent Power Producer Procurement Programme
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualification
RTE	Round Trip Efficiency, also known as AC/AC efficiency, refers to the ratio between the energy supplied to the storage system (measured in MWh) and the energy retrieved from it (also measured in MWh). This efficiency is expressed as a percentage (%).
RVC	Rapid Voltage Change - a network disturbance
SALGA	South African Local Government Association
SAPVIA	South African Photovoltaic Industry Association

Term	Meaning
SAWEA	South African Wind Energy Association
SCM	Supply Chain Management
SDBIP	Stellenbosch Service Delivery Budget Implementation Plan
SDF	Spatial Development Framework
SMEs	Small and Medium Enterprises
SO	System Operator, Eskom
SO Grid Code	System Operator Grid Code
SoC	State of Charge, quantifies the remaining capacity available in a battery at a given time, measured in MWh or as a % of total storage capacity.
SONA	State of the Nation Address
SS	Substation
SSEG	Small Scale Embedded Generation
STMIPPPP	Stellenbosch MIPPPP
Systems Act	Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000), as amended
TA	Transaction Advisory - provides financial expertise and strategic guidance
TA Team	The Cresco Advisory Consortium (comprising Cresco Advisory, Edward Nathan Sonnenbergs Inc, ED Platform, Osmotic Engineering Group and Turner & Townsend)
ToU	Time of Use - segregation of energy rates based on the time in which the energy is being consumed.
TS	Transmission system
Unserved Energy	Unserved Energy is a measure of the amount of customer demand that cannot be supplied due to a shortage of generation, demand-side participation or interconnector capacity
V	Voltage (Electricity Pressure)
W	Watt (energy Flow)
WCG	Western Cape Government

The End

8.3	INVITATION FROM THE STRONG CITIES NETWORK TO FACILITATE THE IMPLEMENTATION OF NEIGHBOURHOOD WATCH AND COMMUNITY SAFETY PROGRAMS IN UGANDA
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Collaborator No:

IDP KPA Ref No: Good governance and compliance

Meeting Date: 14 August 2024

1. SUBJECT: INVITATION FROM THE STRONG CITIES NETWORK TO FACILITATE THE IMPLEMENTATION OF NEIGHBOURHOOD WATCH AND COMMUNITY SAFETY PROGRAMS IN UGANDA

2. PURPOSE

To request Council approval for the travelling arrangements from staff as part of the ongoing relations between Nansana Municipality in Uganda and Stellenbosch Municipality which forms part of the global Strong Cities Network, of which Stellenbosch Municipality is also a member.

3. DELEGATED AUTHORITY

Council

4. EXECUTIVE SUMMARY

Stellenbosch Municipality was accepted as a Strong Cities Network member on 25 July 2023. Since then, two knowledge-sharing engagements took place whereby information was shared with partnering cities on various crime prevention initiatives. An engagement was held in Cape Town in December 2023 where much interest was shown in Stellenbosch's Neighbourhood Watch support programs and safety initiatives, particularly the safety monitors (eyes and ears) project.

An invitation was received from the Mayor of Nansana Municipality, Ms Regina Bakitte, via the Strong Cities Network platform. Mr Gary Boshoff, Mr Charl Kitching and Ms Joan Felix were invited to provide input, training, sharing of policies, implementation plans, support plans etc. of safety initiatives, especially those related to the establishment of Neighbourhood Watches and similar safety projects. Stellenbosch Municipality was identified as a leader in the design, development and implementation of local safety projects with Neighbourhood Watches as the main pillar of such programs and projects. The municipality was therefore invited to share its knowledge and expertise with the other partner cities of the Strong Cities Network.

Training was conducted in Uganda from 13 – 15 May 2024. A report giving feedback on the engagements in May served before Council on 30 July 2024 during which meeting it was resolved as follows:

- (a) that Council notes the feedback report;
- (b) that Council supports the continued engagement between Nansana Municipality and Stellenbosch Municipality to advance community safety initiatives in both municipalities; and
- (c) that Council supports the possible signing of a twinning agreement between Nansana Municipality and Stellenbosch Municipality in relation to Community Safety.

Subsequent request to return and deliver practical advice and follow up interventions, Dir Boshoff and Mr Kitching has been invited to Uganda from 12 – 16 August 2024.

The travel arrangements of the two employees must be approved by Council as it involves travelling outside the borders of RSA. In view of Council's approval of the continued involvement and as Council is only responsible for daily allowances, the approval is recommended.

5. RECOMMENDATIONS

- a) Council approves any further engagements which includes international travel associated with Nansana and Stellenbosch Municipality; and
- b) Council approves the daily allowances for attendees as and when travelling occurs.

6. DISCUSSION**6.1 Background**

An invitation was sent to Stellenbosch Municipality based on previous engagements with various Strong City Network partners. During the engagements Stellenbosch Municipality highlighted one of its key projects namely, supporting various Neighborhood Watches within the municipal boundary. Based on the information shared, other strong city partners/municipalities showed a keen interest in adopting similar community-centered strategies to position safety matters as priority goals in their respective communities. Nansana Municipality (Uganda) then extended a formal invitation to Stellenbosch Municipality to come to Nansana Municipality to train local Councillors and officials on the implementation of neighborhood watches as a community-based crime prevention strategy.

6.2 Discussion**Knowledge sharing: The following aspects formed part of the training program**

- Processes and methods to identify eligible members from the communities to become Neighborhood Watch members.
- Registration processes and funding models
- Basic equipment requirements and support by the local municipalities
- Training on Neighborhood Watch principles
- Various safety programs that Neighborhood Watches can support.
- Practical implementation and support by other municipal departments
- Communication/information sharing between Neighborhood Watches and municipalities.
- Cooperation between private safety partners, Neighborhood Watches and the local police.

During the 13-15 May invite to Uganda: On arrival we met with the Mayor of Nansana Municipality who gave us a detailed brief of the challenges faced by the municipality, her expectations of the training and the specific areas she requires interventions. This laid the foundation for a very productive three-day training adventure.

First day of training

The day was very insightful hearing from the different organizations and members that were in attendance and how eager and hungry they were for the information we had to share with them. Community members and local Councillors were equally focused throughout the sessions, and we could see that they were genuinely interested in acquiring the necessary knowledge and skills to adopt the Neighborhood Watch Model in their respective neighborhoods.

After the presentation was done, community members had the opportunity to discuss specific aspects of the training in groups and produce possible ways in which the project is suitable for local implementation as is, or whether adjustments will be required to adapt to local conditions. The input by the community members was exceptionally good and of a high standard and showed their commitment towards safety within their communities.

In the evening we continued with the training, this time with the Town Clerk, municipal officials and senior Councillors. The opportunity was utilized to give feedback on the day's engagements with local Councillors and what challenges and opportunities we were able to identify.

Second day of training

We travelled to a different part of the municipality, a local primary school, the alma mater of the mayor. We were welcomed by school children doing a welcome dance which signified their appreciation of Stellenbosch Municipality coming all the way from South Africa to extend a hand of friendship.

The community engagements and presentation of the NHW model was well received by the ward councillors and community members. Some of the community members really stood out in the comments they made, and group work they participated in. This really elevated their will and determination to make a difference in their communities.

Based on both days' interactions, inputs received from the attendees and the challenges identified by the Town Clerk and Mayor, the team submitted recommendations for the Mayor and Nansana Municipality staff and Councillors to consider.

The Mayor of Nansana expressed her desire to explore the potential of entering into a twinning agreement between Stellenbosch Municipality and Nansana Municipality. This can be further discussed and ratified at the upcoming Fifth Stronger Cities Network Global Summit scheduled for 3 – 5 December 2024 at the CTICC, Cape Town.

The Mayor of Nansana has also requested further and continuous support from Stellenbosch municipality through ongoing training interventions and roll-out of the Neighborhood Watch training to other areas of the municipality.

This initiative is good for Stellenbosch Municipality in that the municipality is recognised as a leader in localised, community-based safety initiatives. Through the Stronger Cities Network the municipality has already been linked to potential future knowledge-sharing partnerships with other municipalities and cities in Africa, Europe and the rest of the world.

This partnership will be ongoing and rolled out to other areas within Nansana municipality and to other cities in Africa upon request and approval by Stellenbosch Municipality.

6.3 Financial Implications

No financial implications for the municipality in relation to travelling and accommodation as these expenses are covered by the Stronger Cities Network. Only daily allowances are to be covered as per the approved policy by Stellenbosch municipality.

6.4 Legal Implications

Cost Containment policy 2024/2025 refers:

International Travel

9.2 International travel for any official or political office bearer can only be approved by the municipal council in a council meeting open to the public with a supporting vote of the majority of the members of the municipal council present.

9.3 The report to council for approval of international travel must include:

9.3.1 A motivation why the international travel is seen as critical and fully setting out the anticipated benefit that the municipality will derive from attending the event, meeting or function;

9.3.2 If international travel to the destination or event was previously undertaken, state what benefits if any derived from the previous attendance;

9.3.3 The full cost of the international travel including travel allowances to be paid; and

9.3.4 The proposed officials and political office bearers, not exceeding three, to travel and why they have been identified.

6.5 Staff Implications

The two employees will be absent for the duration of the visit.

6.6 Previous / Relevant Council Resolutions

Approval granted to Director Gary Boshoff, Mr. Charl Kitching (Senior Manager) and Ms. Joan Felix (Manager) to attend and facilitate the Neighbourhood Watch training project in Nansana Municipality, Uganda. (approved by council dated: 25/04/2024)

24THCOUNCIL MEETING: 2024-07-30: ITEM 10.1.1

RESOLVED (majority vote with 1 abstention)

- (a) that Council notes the feedback report;
- (b) that Council supports the continued engagement between Nansana Municipality and Stellenbosch Municipality to advance community safety initiatives in both municipalities; and
- (c) that Council supports the possible signing of a twinning agreement between Nansana Municipality and Stellenbosch Municipality in relation to Community Safety.

6.7 Risk Implications

Addressed in the item content

6.8 Comments from Senior Management:**6.8.1 Chief Financial Officer**

The report and recommendations are in line with Council's approved Cost Containment Policy. Furthermore, sufficient funding is available in the 2024/2025 financial year for the payment of daily allowances.

6.8.2 Municipal Manager

Supports the recommendations

ANNEXURES

Invitation letter to Dir Boshoff and Mr Kitching to attend Nansana Municipality from 12 – 16 August 2024.

FOR FURTHER DETAILS CONTACT:

NAME	<i>Charl Kitching</i>
POSITION	<i>Senior Manager</i>
DIRECTORATE	<i>Protection Services</i>
CONTACT NUMBERS	<i>021- 808 8815</i>
E-MAIL ADDRESS	<i>Charl.kitching@stellenbosch.gov.za</i>
REPORT DATE	<i>08 August 2024</i>

ANNEXURE A

Implementation of Neighbourhood Watch in Nansana Municipality (Uganda)

Nansana, Uganda
11-16 August 2024

Invitation

Dear Charl Kitching, dear Gary Boshoff,

Strong Cities Network's [East and Southern Africa](#) (ESA) Regional Hub is pleased to invite you to deliver a follow-up training for Nansana Municipality (Uganda), specifically for the Neighbourhood Watch groups that have been established in Nansana and Gombe Divisions since your last visit.

Context: As a result of the initial training you provided, Nansana Municipality has established 35 Neighbourhood Watch groups that work with community members, the Municipality and security agencies in to address hate, extremism and polarisation. The groups are now ready for further capacity enhancement in work methods and approaches guided by the Code of Conduct and related Group Constitution that you helped develop.

This letter is to invite you to support this process by joining the Mayor and city officials in Nansana from 11-13 August 2024 to deliver further training on Neighbourhood Watch. After this, you are also kindly requested to join a bigger Strategic Mayoral National Workshop scheduled for 14-15 August 2024 in Kampala City, which seeks to build awareness amongst local leaders on the National Prevention and Countering Violent Extremism Strategy of Uganda and promote good practices for city-led prevention efforts.

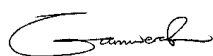
The ESA Regional Hub, as part of its mandate to support local governments with implementing prevention good practices, is delighted to facilitate this training through providing funding support and aiding – as necessary – with developing the training programme/schedule and ensuring the necessary stakeholders from within Nansana, as well as generally at national level attend both events respectively.

RSVP and Travel Support:

Should you be available, we ask that you confirm in writing in response to the invitation email as soon as possible and that you complete this [registration form](#). This is a standard form that asks for dietary and other requirements as well as consent to pictures and communications.

Strong Cities can cover the associated costs (return airfare, accommodation, a per diem to cover meals and incidentals, reimbursements for visas and other travel-related expenses) for up to **two officials from Stellenbosch**. Travel arrangements will be made by Strong Cities and travel and accommodation options will be shared with you for review and approval before confirming. Strong Cities is also at hand to support as needed should you require a visa to come to Uganda.

Sincerely,



Gertrude Rose Gamwera Buyinga

Head, ESA Regional Hub*

Strong Cities Network

grgb@strongcitiesnetwork.org

**The ESA Regional Hub is hosted by the [East African Local Governments Association](#)*

About Strong Cities:

Strong Cities is an independent global network of more than 235+ cities and other local governments dedicated to addressing all forms of hate, extremism and polarisation, while promoting a human rights-based prevention framework. Through in-person and online convenings, exchanges and trainings, Strong Cities facilitates sharing and learning among mayors, other local leaders and municipal-level practitioners. By doing so, it helps local authorities leverage their full potential in prevention, while complementing national, regional and global efforts.

To deepen its engagement with cities and local authorities across the ESA region, and with support from the [EU STRIVE Cities](#) initiative, Strong Cities launched the ESA Regional Hub in 2022, which serves as a helpdesk for cities across the region, supporting them with city-city sharing, localising international good practice and elevating their voices on a global stage. The ESA Regional Hub is hosted by the [East African Local Governments Association](#).

9.	URGENT MATTERS SUBMITTED BY THE MUNICIPAL MANAGER
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10.	MATTERS TO BE CONSIDERED IN-COMMITTEE
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NONE

THE AGENDA HAS BEEN DISCUSSED WITH THE SPEAKER, CLLR Q SMIT AND HE AGREES WITH THE CONTENT.
