

SPECIFICATION



TERMS OF REFERENCE

FOR

DEMONSTRATIONS AND PRESENTATION OF PROPOSALS FOR ALTERNATIVE METHODS OF ENERGY SUPPLY

1. BACKGROUND:

Uninterrupted Electricity supply to WMMLM residents is an essential function that the institution has to maintain to its consumers. With the unreliable supply of grid electricity throughout the country due to shortage of generation capacity which is caused by the increase in energy demand. Winnie Madikizela Mandela Local Municipality held a strategic planning in February 2023 and decided to do research on economical and effective alternative methods of energy supply which will make sure we have stable and reliable energy supply to our residents. Load shedding was implemented country wide to try and stabilise the generation capacity which has led to below challenges :

- a) Loss of income to local businesses.
- b) Loss of job opportunities.
- c) Damage to Infrastructure due to electricity surges and high inrush currents.

2. AIM:

IDENTIFY MOST SUITABLE ALTERNATIVE ENERGY SUPPLY WHICH ARE ENVIRONMENTAL FRIENDLY FOR USE WITHIN WINNIE MADIKIZELA MANDELA LOCAL MUNICIPALITY

The aim is to develop solutions that address the energy reliability, energy efficiency, economic and environmental challenges being faced in WMMLM currently and in the future. The programme

will explore solutions that can fast track the development of technologies that will enable and unlock opportunities for :

- Renewables,
- Smart Grids,
- Hydrogen,
- Digitalization,
- and New Energy generation and Independent Power Production.

Secondary objectives are :

- a) To ensure uninterrupted electricity supply to WMMLM consumers.
- b) To provide cost effective supply of energy.

3. MINIMUM REQUIREMENTS:

1. Registered Independent Power Producer (IPP) which is registered with South African Independent Power Producers Association (SAIPPA).
2. Must have an agreement with Eskom on Distribution Infrastructure use.
3. Reliable source of energy that is conducive to WMMLM weather and terrain.
4. Environmentally friendly or with minimum environmental impact.

4. DELIVERABLES

- Presentation of effective methods of energy supply that are suitable for WMMLM.
- Provision of a list of installation areas and client contact details for completed projects that can be visited during due diligence for product verification and site inspection.

5. EXPECTED OUTCOME.

- The service provider is expected to comply with the above terms of reference.

6. COMPULSORY REQUIREMENTS

- Product must be registered with South Africa Bureau of Standards
- A letter of appointment by previous clients with traceable references
- Product specification by manufacturer is a mandatory document
- Presentation must cover capital investment, return on investment, payback period, operations and maintenance requirements, life span, training and upskilling requirements for municipal personnel to enable product use, resource requirements, effect on natural environment, infrastructure requirements, economic feasibility, risks and emissions reduction potential, commercial availability of technologies etc.

7. TECHNOLOGY REVIEW

The review of the focal technologies will be based on the following criteria:

- **Infrastructure required:** whether major infrastructure developments were required compared to technologies that could be integrated within existing infrastructure more seamlessly.
- **Human capital requirements:** considering the skills required to implement the assessed technology,
and whether those skills are available locally or not.
- **Economic feasibility:** the relative costs of development of the technology.
- **Emissions Reduction Potential:** the relative impact on emissions reductions.
- **Technology readiness:** is assessed on how ready it is for implementation on the short term.
- **Funding availability:** the ability for the technology to attract external capital investment

8. DISCLAIMER

- The municipality accepts no liability in entering into a contracting agreement with any of the interested parties. Proceeding into a bidding process remains at the sole discretion of the municipality and it remains the prerogative of the interested party to comply with copyright and trademarking requirements as legislated.