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Literature Review for Legal Framework for Municipal Engagement with Embedded Electricity Generators

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1 Background Information

The eThekweni municipality would like to facilitate the implementation of renewable energy technologies in the municipality. Renewable energy technologies are still in their infancy in the local market. Challenges currently exist in the implementation of renewable energy technologies. These range from economic concerns to general public acceptance or knowledge, as well as legal issues. Legal and regulatory framework forms the foundation for building a sustainable renewable energy infrastructure. Effective and streamlined rules and regulations on a municipal level may help reduce installation costs and can significantly improve the market environment for solar energy technologies (US Department of Energy, 2011).

In terms of the general population, consumers may encounter local ordinances or homeowners' associations that prohibit or restrict solar energy system installation. Owners of existing systems can also face challenges when their solar equipment is shaded by growing trees or new structures on neighbouring properties (US Department of Energy, 2011). The focus of this review is to look at the current legal framework that is in place on national and municipal levels for embedded generators. In order to increase the uptake of such technologies, the legal framework has to be in place to facilitate proper implementation so as not to have a negative effect on the existing electricity network.

With this in mind, the eThekweni Municipality has developed a legislative and regulatory review relevant to embedded electricity generators in the city. The legislation and regulations that form part of this review are:

- National Legislation
 - The Constitution of the Republic of South Africa
 - Municipal Structures Act

- The Electricity Regulation Act 4 of 2006
- Standard Conditions for Small Scale Embedded Generation (less than 100kW) within Municipal Boundaries (SCSSEG).
- Regulations, rules, guidelines, directives and codes of conduct and practice
- Municipal Finance Management Act
- Municipal Systems Act
- Local Regulations
 - eThekweni municipality electricity supply by-law
 - eThekweni Power Purchase Agreement
 - Natal Local Authority Ordinance

The purpose of this review is summarise all the key areas of legislation applicable to embedded generators and to identify areas where legal opinion or interventions are required to create an enabling environment for embedded generators in the city.

1.1 Definitions

An embedded generator (EG) is defined as a legal entity that operates or desires to operate an electricity generating plant that is, or will be connected, to the Distribution network. This definition includes all types of connected generation, including co-generators and renewables. Alternatively, this definition also applies to the item of the generating plant that is or will be connected to the Distribution network (Eskom distribution, 2008). The next sections review the framework that is applicable to the implementation and operation of embedded generators.

2 National Legislation

2.1 The Constitution of the Republic of South Africa

The Constitution of The Republic of South Africa, Act No. 108 of 1996 outlines the roles and responsibilities of local government. The Sections that may be relevant to the implementation of embedded generators are listed below:

- Section 151 (3) states that a municipality has the right to govern, on its own initiative, the local government affairs of its community, subject to national and provincial legislation, as provided for in the Constitution.
- Section 151 (4) states that the national or a provincial government may not compromise or impede a municipality's ability or right to exercise its powers or perform its functions.
- Section 152 (1) lists the objectives of local government. Of relevance are: (b) ensure the provision of services to communities in a sustainable manner; and (c) to promote social and economic development.
- Section 156 (1) A municipality has executive authority in respect of, and has the right to administer:
 - a) The local government matters listed in Part B of Schedule 4 and Part B of Schedule 5. In context of embedded generators, the municipality is

responsible for electricity and gas reticulation (where reticulation includes the trade or distribution and services associated therewith)

- Section 156 (2) A municipality may make and administer by-laws for the effective administration of the matters which it has the right to administer.
- Section 156 (3) states that subject to section 151(4), a by-law that conflicts with national or provincial legislation is invalid. If there is a conflict between a by-law and national or provincial legislation that is inoperative because of a conflict referred to in section 149, the by-law must be regarded as valid for as long as that legislation is inoperative.
- Section 156 (5) allows a municipality the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

2.2 The Municipal Structures Act 117 of 1998

The Municipal Structures Act of 1998 states in Chapter 5 the Functions and Powers of Municipalities. In Section 84 (1) the Act states: “A district municipality has the following functions and powers: [...] (c) Bulk supply of electricity that affects a significant proportion of municipalities in the district.”

The Association of Municipal Electricity Utilities (AMEU) states that bulk supply of electricity means transmission, distribution and where applicable, generation of electricity and that this is contradictory with the reticulation of electricity set in the Constitution of South Africa 1996 Section 156 (1).

It is noted that the issue of embedded generation has only emerged in the last few years and was not anticipated by these laws. Municipalities must purchase electricity in order to reticulate it. In the past electricity was exclusively bought from Eskom. In the view of their customers municipalities are responsible for electricity supply. In a situation of limited supply by Eskom municipalities should be able to access other sources such as EG or own generation.

2.3 The Electricity Regulation Act 4 of 2006

The Electricity Regulation Act 4 of 2006 as amended in 2007 (ERA) sets out the policy for the electricity supply industry. The Act details the legislative requirements with regards to the generation, transmission, distribution, dispatch, reticulation, import, export, dispatch and trading of electricity. The objects of the Act in Section 2 which promote EGs include:

- a) Ensure that the interests and needs of present and future electricity customers and end users are safeguarded and met, having regard to the governance, efficiency, effectiveness and long-term sustainability of the electricity supply industry within the broader context of economic energy regulation in the Republic;
- b) Facilitate investment in the electricity supply industry;
- c) Promote use of diverse energy sources and energy efficiency

The ERA appoints the National Energy Regulator South Africa (NERSA) as the custodian and enforcer of the regulatory framework provided for in this Act. For EG, NERSA is responsible for the issuing of licences, setting and approval of tariffs, register persons not required to hold a license, and enforce performance and compliance with the Act and license conditions. Activities requiring a licence as listed in Section 7 of the Act and these are:

- a) construct or operate any generation facility;
- b) construct or operate any transmission power system;
- c) construct or operate any distribution power system [facility];
- d) import any electricity;
- e) export any electricity; or
- f) dispatch electricity.

2.3.1 Exemptions

In this regard the operator of a grid-connected generator is required to hold a license from NERSA. Exemptions from obligations to apply for and hold a licence as outlined in Schedule 2 are:

- Operators of non-grid connected generators for demonstration purposes.
- Non-grid connected generation facilities for own use with generation capacity of less than 1MW.
- Non-grid connected supply of electricity except for commercial use.

2.3.2 Licence Application Process

The application process to NERSA for embedded generators includes the completion and submission of an application for an electricity generation licence and a public participation process in terms of The Electricity Regulation Act, 2006. The following information needs to be provided on the application (NERSA, undated):

- Section A requires the particulars of the applicant. State whether the applicant is a local government body, a juristic person established in terms of an act of parliament, a department of state, a company or other legal body.
- Section B requires the desired date from which the licence (if granted) is to take effect. The normal processing time for a licence application is 120 days once all relevant information has been provided and there are not objections received.
- Section C requires applicant to provide information on particulars of proposed generation station. This includes the type of generation, expected commissioning date, the existing and or planned capacity, maximum generation capacity (MW) to be available and energy produced (MWh) over the next five years of operation, energy conversion efficiency and expected future life of generation station.
- Section D requires particulars of long term arrangements with primary energy suppliers. For solar PV this will be the solar resource estimations as fuel supply is from the sun.
- The maintenance programmes and decommissioning costs are required in Section E of the application. The details of any proposed maintenance programmes including the cost and duration covering the next six years. Project proposals to state the expected availability, planned outage rate and forced outage rate of the plant over the first five years of operation.
- The customer profile is completed in Section F. The persons to whom the applicant is providing or intends to provide electricity from the generation station such as Eskom, local government or an entity. The power purchase agreement in to be attached to this section. The network connection details are also completed in this section. This requires information

on the connection points, voltages, wheeling arrangement (if applicable), and single line diagram.

- Section G of the application is the financial section of the generator. This section requires the following information:
 - Projections of and current statements of the accounts in respect of the undertaking carried on by the applicant, showing the financial state of affairs of the most recent period, together with copies of the latest audited annual accounts where such have been prepared.
 - Annual forecasts for the next five years of costs, sales and revenues generated by the project, stating the assumptions underlying the figures.
 - Estimates of net annual cash flows for subsequent periods (5 years; 10 years; 15 years) sufficient to demonstrate the financial security and feasibility of operating the generation station.
 - Project financing information to include debt funder, debt to equity ratio and the terms and conditions of the funding arrangements.
- Human resources information is submitted in Section H. Information is required on the number of staff and employees and their categories in the service of the applicant at the generation station and in any support services separate from the generation station.
- Section I covers the permissions granted to the generator from other government departments and regulatory authorities. Details of progress made to obtain required permits and approvals are to be provided in the case where they have not been granted.
- Section J is the Broad-Based Black Economic Empowerment part of the application. The project needs to provide information on direct empowerment, human resource development, indirect empowerment, and NERSA discretionary points.
- Section K is for providing of any other relevant information.

According to Section 11 of the ERA when the application is made, NERSA may require the applicant to publish a notice of the application on appropriate newspapers or other media in the area of the proposed activity in at least two official languages for public participation. The advertisement must state the following (ERA: 11, 2006):

- The name and objectives of the applicant
- The location where the application will be available for inspection by the public
- The period within which any objections to the issue of the licence may be lodged with NERSA including the address of the regulator where these may be lodged
- The objections must be substantiated by the way of an affidavit or solemn declaration by the public

Before considering an application for a licence, NERSA must furnish the applicant with all substantiated objections in order to allow the applicant to respond. The regulator may also request additional information as may be necessary at this point. After the public participation process is

complete and all information is requested is provided NERSA has 120 days to make a decision (ERA: 11, 2006).

2.3.3 Criteria for granting or refusing an Electricity Generating licence

The application for a generation licence is all-encompassing and requires information on the proposed generation station such as energy available for the next five years, long term arrangements with primary energy suppliers, maintenance programmes and decommissioning costs, power purchase agreements, and financial models. This indicates that NERSA will only licence economically viable generators with long term sustainability and with generation in line with national policy. As the sole authority to issue generation licences, NERSA may refuse a license on the following grounds:

- If the generator contravenes the objects of the ERA listed in Section 2.
- If the generation is not in line with national policy such as the IRP 2010.
- If the technical requirements are not met in terms of the regulations, rules, guidelines, directives and codes of conduct and practice. The ERA forms the legal basis on which standards and codes of practice which have to be adhered to.
- If the application is not made on time and if the application fee is not included.
- Upon submission of an application NERSA may require the generator to conduct a public participation process. NERSA is obligated to consider all objections to the issue of the licence which are lodged by the general public. If NERSA considers the objections to be substantive then the application may be declined.

2.3.4 Electricity Regulations on New Generation capacity

Section 34 of the ERA allows the minister in consultation with NERSA to determine that new generation capacity is needed to ensure adequate supply of electricity. This clause of the ERA set the legal basis for the procurement of electricity from IPP by the Department of Energy through the Renewable Energy Independent Power Producer Programme, REIP. The Electricity Regulations on New Generation Capacity set regulations for the procurement of new generation capacity by organs of state, (the buyer), such as the municipality. The regulations apply to procurement of new generation capacity from:

- renewable energy sources and cogeneration such as EG
- base load, mid-merit and peak load
- and cross border projects

Of relevance to embedded generators, the objectives of the regulations are to facilitate for the establishment of new generation capacity, regulate PPAs between EG and buyer by setting minimum standards or requirements and to ensure the economic viability of generators. This is done by the facilitation of the full recovery by the buyer of all costs efficiently incurred by it under or in connection with a PPA including a reasonable return based on the risks assumed. The regulations also ensure the transparency and cost reflectivity in the determination of electricity tariffs.

The regulations require that an integrated resource plan be developed and monitored for the planning for new generation capacity. This implies that new generators must be in line with the IRP

2010 as developed by the Minister and NERSA. The Minister in consultation with NERSA may determine the entity to establish the new generation capacity (Eskom, IPP or an organ of state), the buyer or where applicable the procurer and the buyer. The ministerial determinations are binding on the buyer and the procurer.

Feasibility studies may be required to be undertaken which need to consider and demonstrate:

- the anticipated costs of the generator,
- the proposed allocation of financial, technical and operational risk between the stakeholders,
- the anticipated value for money, i.e. that the project results in a net benefit to the prospective buyer or to Government having regard to cost, price, quality, quantity, risk transfer or a combination thereof
- the material legal, financial and technical requirements including consents that will be required
- Whether the appropriate generator should be Eskom, another organ of state or an IPP.

Section 9 of the regulations outlines the requirements for conclusion of a PPA. The PPA must meet the following requirements: value for money; technical, operational and financial risk transfer to the generator; effective mechanisms for implementation, management, enforcement and monitoring of the PPA; and satisfactory due diligence in respect of the buyer's representative and the generator. In order for the municipality to enter into a PPA it has to ensure that it has a contract management plan which explains the capacity, proposed mechanisms and procedures to implement, manage, enforce, monitor, and report on the PPA to National Treasury and the Minister. The municipality also has to ensure that any portion of the buyer's allowable revenue approved or allocated by NERSA for purposes of implementation of new generation capacity projects will be used solely for the purpose of ensuring that the buyer's financial obligations in respect of new generation capacity projects will be met.

The prices charges and tariffs as set by NERSA ensure the buyer is able to recover the full amount of the costs efficiently incurred by the buyer. This includes: payments for the purchase on new generation capacity in terms of the PPA; incurred costs of the buyer performing any function contemplated in the regulations; incurred costs of the buyer in administering power purchase agreements; costs and amounts paid by the buyer arising from the termination of a power purchase agreement.

2.4 Standard Conditions for Small Scale Embedded Generation (less than 100kW) within Municipal Boundaries (SCSSEG).

Due to the load shedding experienced in 2008, increasing electricity tariffs and reduction in renewable energy technology prices, there was a significant increase in the interest of installing small scale generation units by the public. In response to this, NERSA approved the Standard Conditions for Small Scale Embedded Generation (less than 100kW) within Municipal Boundaries (SCSSEG). This was approved to ease the burden on NERSA as the number of installations would

pose significant problems in terms of the ability to handle the applications that would be received. The standard conditions require that municipalities must register and maintain a database of all small scale embedded generation within their area.

This is in line with the following sections of the of the ERA whereby the Minister in consultation with NERSA and advisory forum may determine any person involved in activities listed below does not require licensing and must only register with NERSA :

- Section 8: Certain activities not licensed – The Minister may after consultation with the Regulator and stakeholders in the advisory forum, determine by notice in the *Gazette* that any activity contemplated in section 7(1) need no longer be a licensed activity from the date set out in the notice (ERA: 8, 2006).
- Section 9: Registration - (1) The Minister may, in consultation with the Regulator, determine by notice in the *Gazette* that any person involved in an activity relating to trading, or the generation, transmission or distribution of electricity that does not require licensing in terms of section 7 read with section 8 must register with the Regulator.
(2) Any person who has to register with the Regulator must do so in the form and in accordance with the prescribed procedure, and an application for registration must be accompanied by the registration fee prescribed by rule: Provided that any person holding a valid licence at the date of a determination contemplated in section 8 must be issued with a registration certificate without complying with the prescribed procedure (ERA: 9, 2006).

The minimum information required from the EG for the municipal database is:

- The technology of the generation
- The installed capacity
- The location on the network and GPS
- Energy storage availability (if applicable)
- Customer details (name and account number)

The municipality is responsible for the registration of the small scale EG. They also have to report to NERSA on an annual basis with information outlined in the documentation. This includes the number of and total capacity of each technology installed, total energy generated onto their system in each “Time of Use tariff” metered time period, complaints on the quality of supply from customers on the same circuit, tariffs applicable, safety related issues, and the standard agreement.

2.5 Regulations, rules, guidelines, directives and codes of conduct and practice

Section 35 of the ERA also sets the mandate for NERSA to, in consultation with stakeholders, make guidelines and publish codes of conduct and practice or make rules. The guidelines, codes of conduct and practice and rules relate to performance objectives, operation, use and maintenance of power systems, standards of quality of supply and service, technical and safety standards etc. The codes that apply to each EG are dependent on the maximum export capacity, type of renewable

technology, and the distribution system connection voltage. EGs have the following connection voltage options (NERSA, 2012):

- Low Voltage; LV: $0 < \text{Nominal Voltage} \leq 1 \text{ kV}$
- Medium Voltage; MV: $1 \text{ kV} < \text{Nominal voltage} \leq 44 \text{ kV}$
- High Voltage; HV: $44 \text{ kV} < \text{Nominal voltage} \leq 220 \text{ kV}$

The Table below shows the connection voltage options and power ranges for EG. These determine the requirements in terms of guidelines, codes of conduct and practice and rules NERSA 2012.

Table 1: NERSA categories for renewable energy power plants (NERSA, 2012)

Categories	Connection Voltage	Power Range
A1	LV	$0 < x \leq 13.8\text{kVA}$
A2	LV	$13.8\text{kVA} < x < 100\text{kVA}$
A3	LV	$100 \text{ kVA} \leq x < 1\text{MVA}$
B	MV	$0 < x < 1\text{MVA}$
B	N/A	$1\text{MVA} \leq x < 20\text{MVA}$
C	N/A	$\geq 20 \text{ MVA}$

For EGs the following codes of conduct apply:

- Distribution Standard for the Interconnection of Embedded Generation (MV and HV connections)
- The South African Distribution Code - Section 8 outlines the requirements of the EG and Distributors.
- The South African Grid Code: Network Code – EGs with nominal capacity greater than 10 MVA must comply with Section 3.1 of the South African Grid Code, Connection Conditions
- Grid Connection Code for Renewable Energy Plants Connected to the Electricity Transmission or the Distribution System in South Africa. The requirements depend on the category of the EG.

Small scale generators have the least regulations for compliance. For small scale generators up to a 100 kW, categories A1 and A2 the requirements for compliance in this criterion are the NRS 097 Grid Interconnection of Embedded Generation, Part 2: Small-scale embedded generation series of documents (NRS 097-2). So far only two of the four part series of quality of supply standards have been developed. According to the SCSSEG the minimum requirement for compliance is the NRS 097-2-1: Section 1 – Utility Interface. The other part of this series that has been developed is the NRS 097–2-2: Section 2 – Embedded Generator Requirements. The other parts of this series to be developed in the future are the: NRS 097-2-3: Section 3– Utility framework; and NRS 097-2-4: Section 4–Procedures for implementation or application.

For quality of supply, small scale EGs are also required to comply with standards set in the:

- Grid Connection Code for Renewable Energy Plants Connected to the Electricity Transmission or the Distribution System in South Africa;
- the NRS 048-2: Electricity supply - Quality of supply Part 2: Voltage characteristics, compatibility levels, limits and assessment method;
- and NRS 048-4: Electricity supply - Quality of supply Part 4: Application guidelines for utilities.

Category A3 has additional standards that apply to those in A1 and A2. These can be found in the Grid Connection Code for Renewable Energy Plants Connected to the Electricity Transmission or the Distribution System in South Africa, the South African Grid Code, NRS 029, NRS 030 and NRS 031.

Category B and C have similar international and national standards. In addition to this they also have protective relay standards, Eskom standards, distribution standards, and distribution test and maintenance procedures that have to be adhered to. These will not be discussed in detail here as they are more complex and extensive due to the connection voltage and capacity. The details are however available in the excel tool that has been provided with this report.

2.6 Municipal Finance Management Act

The legislation governing the types of contracts and periods which the municipality can enter are the Municipal Structures Act, 117 of 1998; the Municipal Systems Act, 32 of 2000; the Municipal Finance Management Act, 56 of 2003. The MFMA's key purpose is to ensure the sound and secure fiscal management of municipalities and municipal entities. The Municipal Finance Management Act, MFMA governs the contract periods that municipalities can enter into with the EG. The MFMA is the key Act which governs municipal relations as it relates to municipalities, municipal entities and all other organs of state in their dealings with municipalities. It is for this reason that no contract can be entered into or extended without full compliance with the MFMA.

The Act has seven key purpose areas, central to this enquiry are two of these: 'budgetary and financial planning processes and co-ordination' and secondly, 'supply chain management'. The budgetary and financial planning processes determines the contract periods which the municipality can enter. Section 16 (1) of the MFMA states that the council of a municipality must for each financial year approve an annual budget (MFMA: 16, 2003). Section (3) then states that Subsection (1) does not preclude the appropriation of money for capital expenditure for a period not exceeding three financial years provided a separate appropriation is made for each of those financial years (MFMA: 3, 2003).

2.6.1 Future budgetary implications

The common barrier identified by the municipality in implementing Power Purchase Agreements (PPA) is to extend the agreement to more than three years. In order for the embedded generator to accept the agreement, the timeframes would usually have to be a minimum of twenty years. According to the Section 33 of the MFMA it is possible to extend such a contract for longer than three years, as long as due process is followed. This would apply to each PPA that the municipality will enter into. Following this process for each PPA would be onerous for the municipality. It is not clear if it is legal to follow a single Section 33 process for a number of PPAs.

Section 33 of the MFMA states:

33. (1) A municipality may enter into a contract which will impose financial obligations on the municipality beyond a financial year, but if the contract will impose financial obligations on the municipality beyond the three years covered in the annual budget for that financial year, it may do so only if—

- (a) the municipal manager, at least 60 days before the meeting of the municipal council at which the contract is to be approved—
 - (i) has, in accordance with section 21A of the Municipal Systems Act—
 - (aa) made public the draft contract and an information statement summarising the municipality's obligations in terms of the proposed contract; and
 - (bb) invited the local community and other interested persons to submit to the municipality comments or representations in respect of the proposed contract; and
 - (ii) has solicited the views and recommendations of—
 - (aa) the National Treasury and the relevant provincial treasury;
 - (bb) the national department responsible for local government; and
 - (cc) if the contract involves the provision of water, sanitation, electricity, or any other service as may be prescribed, the responsible national department;
- (b) the municipal council has taken into account—
 - (i) the municipality's projected financial obligations in terms of the proposed contract for each financial year covered by the contract;
 - (ii) the impact of those financial obligations on the municipality's future municipal tariffs and revenue;
 - (iii) any comments or representations on the proposed contract received from the local community and other interested persons; and
 - (iv) any written views and recommendations on the proposed contract by the National Treasury, the relevant provincial treasury, the national department responsible for local government and any national department referred to in paragraph (a)(ii)(cc); and
- (c) the municipal council has adopted a resolution in which—
 - (i) it determines that the municipality will secure a significant capital investment or will derive a significant financial economic or financial benefit from the contract;
 - (ii) it approves the entire contract exactly as it is to be executed; and
 - (iii) it authorises the municipal manager to sign the contract on behalf of the municipality.

(2) The process set out in subsection (1) does not apply to—

- (a) contracts for long-term debt regulated in terms of section 46(3);
- (b) employment contracts; or
- (c) contracts—
 - (i) for categories of goods as may be prescribed; or
 - (ii) in terms of which the financial obligation on the municipality is below—
 - (aa) a prescribed value; or
 - (bb) a prescribed percentage of the municipality's approved budget for the year in which the contract is concluded.

- (3) (a) All contracts referred to in subsection (1) and all other contracts that impose a financial obligation on a municipality—
- (i) must be made available in their entirety to the municipal council; and
 - (ii) may not be withheld from public scrutiny except as provided for in terms of the Promotion of Access to Information Act, 2000 (Act No. 2 of 2000).
- (b) Paragraph (a)(i) does not apply to contracts in respect of which the financial obligation on the municipality is below a prescribed value.
- (4) This section may not be read as exempting the municipality from the provisions of Chapter 11 to the extent that those provisions are applicable in a particular case.”

2.6.2 MFMA and Supply Chain Management

The MFMA outlines the process which must be followed for contracts and contract management for procurement of goods and services through the supply chain management. The terms and conditions of the PPA which the eThekweni municipality enters into must be in line with Section 116 of the MFMA and supply chain management system. This Section outlines provisions that have to be included in every contract in terms of termination of contract, dispute resolution and periods of contract review. The responsibilities of the accounting and the procedures to follow in amending a contract are also part of Section 116 of the MFMA.

Section 116 of the MFMA outlines the process for contracts and contract management

116. (1) A contract or agreement procured through the supply chain management system of a municipality or municipal entity must—
- (a) be in writing;
 - (b) stipulate the terms and conditions of the contract or agreement, which must include provisions providing for—
 - (i) the termination of the contract or agreement in the case of non- or underperformance;
 - (ii) dispute resolution mechanisms to settle disputes between the parties;
 - (iii) a periodic review of the contract or agreement once every three years in the case of a contract or agreement for longer than three years; and
 - (iv) any other matters that may be prescribed.
- (2) The accounting officer of a municipality or municipal entity must—
- (a) take all reasonable steps to ensure that a contract or agreement procured through the supply chain management policy of the municipality or municipal entity is properly enforced;
 - (b) monitor on a monthly basis the performance of the contractor under the contract or agreement;
 - (c) establish capacity in the administration of the municipality or municipal entity—
 - (i) to assist the accounting officer in carrying out the duties set out in paragraphs (a) and (b); and
 - (ii) to oversee the day-to-day management of the contract or agreement; and
 - (d) regularly report to the council of the municipality or the board of directors of the entity, as may be appropriate, on the management of the contract or agreement and the performance of the contractor.
- (3) A contract or agreement procured through the supply chain management policy of the

municipality or municipal entity may be amended by the parties, but only after—

- (a) the reasons for the proposed amendment have been tabled in the council of the municipality or, in the case of a municipal entity, in the council of its parent municipality; and
- (b) the local community—
 - (i) has been given reasonable notice of the intention to amend the contract or agreement; and
 - (ii) has been invited to submit representations to the municipality or municipal entity.”

2.6.3 MFMA and Loans and Leases

Section 164 of the MFMA clearly states that municipality may not “conduct any commercial activities” and it specifically states that municipalities may not make loans to members of the public (see textbox below, Section 164 1 C III). In terms of the MFMA it is therefore not legally possible for the eThekweni Municipality to develop a renewable energy intervention that will entail the municipality making a loan to individuals for the purchase of renewable energy installations. Please see section 3.3 below.

MFMA Section 164 Forbidden activities

- 1) No municipality or municipal entity may-
 - (a) conduct any commercial activities-
 - I. otherwise than in the exercise of the powers and functions assigned to it in terms of the Constitution or national or provincial legislation: or
 - II. outside the borders of the Republic;
 - (b) provide a municipal service in an area outside its jurisdiction except with the approval of the council of the municipality having jurisdiction that area: or in
 - (c) make loans to-
 - I. councillors or officials of the municipality;
 - II. directors or officials of the entity; or
 - III. **members of the public.**
- 2) If a municipality or municipal entity on the date which this section takes effect is engaged in any activity prohibited by subsection (1)(a) or (b) and which is otherwise lawful, the municipality entity must take all reasonable steps to rectify its position or and to comply with that subsection as soon as may be reasonable in the circumstances.

2.7 Municipal Systems Act

The Municipal Systems Act 32 of 2000 makes provision for municipalities to “levy and recover fees, charges or tariffs in respect of any function or service of the municipality”¹. Furthermore a municipal surcharge can be implemented as a “charge in excess of the municipal base tariff that a municipality may impose on fees for a municipal service provided by or on behalf of a municipality, in terms of

¹ Municipal Systems Act 32 of 2000 Section 75A. (Local Government Laws Amendment Act, No. 51 of 2002)

section 229 (1) (a) of the Constitution”². Within this context, the eThekweni Surcharge By-Laws³ allows the municipality to charge a percentage on any basic service provided by municipality. It is also possible to implement discrimination with regards to surcharges, for example a surcharge that is applicable to households that have a SWH installed.

It is therefore possible for the eThekweni municipality to levy a tariff or surcharge for services provided. And, it could be argued that by providing embedded renewable energy through bulk purchase and consequently reduced prices, the municipality would be providing a renewable energy service to the public.

The mechanism for implementing a tariff is outlined in Section 75A of Municipal Systems Act 2000 and is provided below. It is evident from this excerpt that initiating a renewable energy tariff could be carried out relatively quickly. The resolution will need to be signed by the City Treasury, the City Manager, The Head of Legal and Head of Procurement and Infrastructure. The resolution will be tabled with municipal council with a support from the majority of its members. It then needs to be made available public for a period of 30 days, but does not require public consent of participation.

Municipal Systems Act 32 of 2000 75 A - General power to levy and recover fees, charges and tariffs

- 1) A municipality may-
 - a. levy and recover fees, charges or tariffs in respect of any function or service of the municipality; and
 - b. recover collection charges and interest on any outstanding amount.
- 2) The fees, charges or tariffs referred to in subsection (1) are levied by a municipality by resolution passed by the municipal council with a supporting vote of a majority of its members.
- 3) After a resolution contemplated in subsection (2) has been passed, the municipal manager must, without delay-
 - a. conspicuously display a copy of the resolution for a period of at least 30 days at the main administrative office of the municipality and at such other places within the municipality to which the public has access as the municipal manager may determine;
 - b. publish in a newspaper of general circulation in the municipality a notice stating-
 - i. that a resolution as contemplated in subsection (2) has been passed by the council;
 - ii. that a copy of the resolution is available for public inspection during office hours at the main administrative office of the municipality and at the other places specified in the notice; and
 - iii. the date on which the determination will come into operation; and
 - c. seek to convey the information referred to in paragraph (b) to the local community by means of radio broadcasts covering the area of the municipality.
- 4) The municipal manager must forthwith send a copy of the notice referred to in subsection (3)(b) to the MEC for local government concerned.

² Municipal Fiscal Powers And Functions Act 12 OF 2007, pp2.

³ Bylaws Regulating The Imposition Of Surcharges On Electricity Supplied To Occupiers Of Municipal Property. <http://www.durban.gov.za/durban/government/bylaws/bylaws-regulating-the-imposition-of-surcharges-on-electricity-supplied-to-occupiers-of-municipal-property>

3 Local Regulations

3.1 eThekweni municipality electricity supply by-laws

To be permitted to connect to the municipal distribution system, an application has to be made to the eThekweni Electricity department (eThekweni Electricity, 1998). Section 2 of the eThekweni electricity supply by-laws states that:

“No person shall install or permit to be installed a new electrical installation in any premises within the area of supply and connect any such installation to the Council’s supply main, except under the authority of the written permission of the Engineer, which authority the Engineer may grant, subject to such conditions as he may determine, or refuse.”

The Engineer is the Executive Director of the Durban Electricity Service Unit, or his duly authorised representative. The eThekweni municipality has application procedure for EGs in place. The application requires information such as the location, mode of embedded generation (own use, export excess, export only, wheeling), fuel source, type of energy conversion, total capacity, total export generation capacity, electrical parameters of EG, generator transformer parameters etc. The application form for the connection of the embedded generator is available on the website. The responsibilities of the embedded generator to the eThekweni electricity include (eThekweni Electricity, 2012):

- Entering into a connection agreement with eThekweni Electricity before connecting onto the Distribution System.
- Ensure that the reliability and Quality of Supply complies with the terms of the connection agreement.
- Comply with the Distributor’s protection requirement as well as protection of own plant against abnormalities, which could arise on the Distribution System.
- Be responsible for any dedicated connection costs incurred on the Transmission System or Distribution System as a result of connection of the EG facility to the Distribution System.
- Be responsible for synchronizing the generating facility to the Distribution System within pre-agreed settings.

The application document also contains the following to be adhered to by the EG (eThekweni Electricity, 2012):

- connection point technical requirements,
- protection requirements,
- quality of supply requirements
- telemetry
- operational responsibilities
- fault reporting and analysis procedures
- outage scheduling and coordination for EG with maximum capacity greater than 1MW

In addition to the application for connection the by-laws stipulate metering requirements. The metering installation shall measure the electricity imported and exported by the EG at the Point of Common Coupling pursuant to this agreement. The Metering Installation shall be managed by the municipality in accordance to NRS 057. Metering will be the bi-directional, 4-quadrant type in line with NRS 057. The cost of upgrading existing meters and metering equipment shall be for the account of the EG (eThekweni Municipality, 2012).

3.2 eThekweni Power Purchase Agreement

eThekweni municipality currently has a system in place to enter into a power purchase agreement with EGs. A council resolution of 2011 authorized the Head of Electricity to enter into a 3-year Power Purchase Agreement (PPA) with local electricity producers other than Eskom. The resolution is described as containing the following four requirements:

1. The price paid to the independent power producer does not exceed the cost of electricity as purchased from Eskom.
2. The power produced is “cleaner than Eskom’s coal fired electricity”
3. The Independent Power Producer meets a set of technical requirements for the grid connection.
4. The cost of the grid connection is covered by the Independent Power Producer.

The PPA contract period is limited to a term of 3 years with option to renew for a further period of 3 years on the same terms and conditions subject to compliance with legislative requirements and authority being obtained from the eThekweni Municipal Council and/or National Treasury for this agreement to extend beyond the Initial Period (eThekweni Municipality, 2012). This deviates from international standards where the PPA period is usually for a 20 year period. This arrangement allows for the economic viability of renewable energy technologies as finance for these projects. This is especially true for solar photovoltaic which is the focus of this study. This clause makes it difficult to obtain financing for EGs as the debt tenor for these systems is greater than three years due to the high initial capital investment required. Thus lenders are not willing to take the risk of entering into contracts whereby their debt will not be serviced.

The MFMA and NERSA determine the tariffs that apply to EGs. According to the council resolution outlined above, the price paid by the municipality to the EG should not exceed the cost of electricity as purchased from Eskom. The rates payable to the Embedded Generator shall not exceed the rates as payable to Eskom (Megaflex - Local Authority Rates / > 132kV / 300-600km tariff structure or closest equivalent in the event that the Megaflex rate no longer exists). This is in line with the MFMA whereby the municipality may not enter into a contract which will impose financial obligations beyond a financial year. This means that tariffs paid to EG should be tied to Eskom rates (eThekweni Municipality, 2012) .

For the import of electricity, the EG shall pay for electricity imported in accordance with the prevailing Municipal Industrial Time of use tariff (ITOU) structure and rates including all fixed and mandatory network charges as detailed in Annexure B of the PPA. There is a fixed network access

charge which is based on the highest kVA that may be imported or exported and that the fixed service charge is payable irrespective of whether electricity is imported or exported (eThekweni Municipality, 2012).

3.3 Natal Local Authority Ordinance

The Natal Local Authority Ordinance 25 of 1974⁴ (NLAO25), section number 248 notes that it is possible for municipalities in KZN to sell or lease electrical appliances to individuals (See textbox below Section 248 (2)).

The Natal Ordinance and MFMA could therefore be interpreted as contradictory with regards to the activity of the municipality leasing and selling embedded renewable energy installations to individuals. However, the MFMA also notes that although commercial activities are prohibited, those that are done in exercise of “the powers and functions assigned to it in terms of the Constitution or national or provincial legislation” are permissible. The Natal Ordinance is an exercise of the powers and functions assigned in terms of the constitution and it could therefore be argued that the NLAO supersedes the MFMA with regards to municipality’s ability to lease and purchase SWHs on behalf of individuals.

NLOA25 Section 248 - Private Installation and Sale or Lease of Appliances

(1) The council may by agreement with the owner or occupier of any private premises supply and install in any building thereon such electric lines and electric and gas fittings as may be required, upon such conditions of payments as may be agreed upon.

(2) The council may also sell or lease to any private consumer electric apparatus or appliance for lighting or heating or other purposes or assist any such consumer to acquire the same upon such terms and conditions as may be agreed upon.

4 Conclusion

The legal framework that applies to EG has been outlined. The legal framework supporting the implementation of EG has been discussed from a constitutional to local government level. For the purposes of this report the technical requirements for compliance have been fully assessed for EG with maximum export capacity of up to 1 MW. The regulatory standards for larger generators have been detailed in the tool accompanying this report. The guidelines, codes of conduct and practice and rules have been developed by stakeholders to ensure quality of supply for all customers on the network.

The procurement process of electricity generated has been detailed for the eThekweni municipality. It is clear from this that the current legal framework for PPA that the contract periods and tariffs do not facilitate the implementation of EG unless the independent power producer is able to

⁴ Natal Local Authorities Ordinance, No 25 OF 1974, pp 168

completely finance the project from their own funds without having to rely on debt funding. The economic viability of implementation of projects is not possible with such conditions. Investigation will need to be conducted on possible ways to address these barriers. This in turn will facilitate the drafting of a by-law to facilitate the implementation of EG in eThekweni.

5 References

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