Request of investors for the PV rooftop rollout in NMBM

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1 DEFINITIONS

The following expressions bear the meanings assigned to them below and cognate expressions bear corresponding meanings.

1.1 "Customer" means a customer of the NMBM and "Participating Customer" means a customer of the NMBM that has concluded an agreement with the investor for the installation and use of a PV system(s) and, where appropriate, Customers and Participating Customers shall mean one or more of them as the context may require;
1.2 "NMBM" means Nelson Mandela Bay Municipality, a municipality established under the laws governing municipal structures in South Africa or its nominee or successor-in-title, including any RED established, which subsequently acquires the rights and obligations of the NMBM to provide the Customers with energy from time to time;
1.3 "Participating Customer Agreement" means the agreement concluded between the Investor and a Participating Customer in terms whereof the Investor will, subject to the terms and conditions of that agreement, install, maintain and repair a PV system(s) at the Site(s) of the Participating Customer;
1.4 "Renewable Energy", in the context of this Agreement means electrical energy harnessed from naturally-occurring non-depletable sources, such as solar, wind, biomass, hydro, tidal, wave, ocean-current and geothermal sources of which solar energy is applicable to this Agreement;
1.5 "PV" means photovoltaic and describes the technology used to harness the solar energy
1.6 "Investor" means a person or entity signing an agreement with the NMBM for provision of services. The investor will install a PV system on participating customers roofs and maintain it free of charge for the contract period;
1.7 "Site" means a site, whether residential, commercial or industrial, where a PV system, or more than one, has been/or will be installed. Sites shall have an equivalent meaning.
1.8 "NERSA" means National Energy Regulator South Africa
1.9 "SSEG" means Small Scale Embedded Generation. NERSA approved the Standard Conditions for Embedded Generation within Municipal Boundaries. Under this approval generators with generation systems smaller than 1MW can generate in the absence of a generation license.

2 PURPOSE

The Electricity & Energy Directorate of the Nelson Mandela Bay Municipality (NMBM) invites suitably qualified service providers, hereinafter referred to as "Investors", to submit information regarding the provision of professional services to the NMBM regarding the installation of PV rooftop systems to the citizens within Nelson Mandela Bay.

3 INTRODUCTION AND BACKGROUND

It is the responsibility of the NMBM, as the local authority, to drive economic growth and development, deliver services to the community, while ensuring a safe and healthy environment. Energy is a key component of quality of life, and is inextricably linked to socio-economic wellbeing as well as carbon emissions, the latter giving rise to one of the greatest developmental challenges of the day, namely climate change.

Small scale renewable energy has numerous benefits i.e. the reduction of load on the grid, creation of opportunities for investment into the local economy while contributing to low emissions development, improved resource efficiency because of the reduction in transmission & distribution losses, short build time, as well as the involvement of consumers in energy supply.

The periods of load shedding since 2008 and subsequent national requirement to reduce the electricity demand by 12%, brought about a consciousness of the real cost of electricity and the

limitations with regards to existing coal fired power stations. This consciousness resulted in a number of realizations i.e.

- there is an urgent need for a greater reliance on renewable energy sources, and greater levels of energy efficiency;
- renewable energy installations coupled to the public grid becomes a universal tool for multiple parties, not just for the generator or the utility;
- the need to augment the electricity supply in Nelson Mandela Bay and diversify the mix of energy sources; and
- renewable energy holds huge benefits to the economy through the creation of investment opportunities and platforms for local economic development as well as establishing Nelson Mandela Bay as an investment hub.

In September 2011 NERSA approved the Standard Conditions for Embedded Generation within Municipal Boundaries. Under this approval generators with generation systems smaller than 100kW can generate in the absence of a generation license. Following this approval the NMBM Electricity and Energy Directorate submitted a proposal to the NMBM Infrastructure, Engineering and Energy Committee in May 2012 regarding the proposed Green Economy Business Plan, which includes embedded generation. In the same year a Mayoral Resolution was signed by the Executive Mayor.

Following the resolution the Electricity and Energy Directorate drafted the NMBM Application for the Connection of Small Scale Embedded Generation (SSEG) and Interim Requirements for SSEG, which details the process, information required as well as all legislation, specifications and standards that need to be adhered to.

Since then NMBM allows under this conditions the connection of SSEG to its electricity grid free of charge.

2016 council approved a new investment tariff, which should encourage investors and citizens to install more SSEG. This tariff should allow any citizen to install a PV rooftop system without capital investment and at the same time create jobs in the renewable energy sector within the boundaries of the metro.

4 CONCEPT

The NMBM wishes to facilitate agreements which will enable Investors to wheel and supply embedded power to participating customers within the Nelson Mandela Bay metropolitan area. The NMBM has allocated 250MW of the total electricity demand within the metropolitan area to be supplied by embedded generators from participating customers within Nelson Mandela Bay. Investors can apply for a certain amount of this 250MW and will be liable for a refundable application fee (for more details see section ”Agreements”) according to the capacity they are applying for.

It is important to note the following:

- Participating customers will have to be connected to the NMBM electrical network; and
- The proposed program is based on NERSA’s approval in terms of the connection of embedded generators within municipal boundaries and the Government Gazette No 41237 of 10 November 2017, Vol 629, Notice 1231 by the Department of Energy. With regards to individual systems, Investors will thus be limited to systems that are sized in accordance with the regulations. From the date on where NERSA approves new regulations regarding grid connected SSEG’s, NMBM will amend the allowed maximum size of connected PV system according to the new regulation.
- The Agreement period between NMBM and the investor is for 25 years, hence the contract period with the participating customer and the investor per installation is 20 years or less.

- The amount of produced kWh/a from the PV system per participating customer must be half of the yearly electricity consumption of this participating customer, whereby it is allowed to install the necessary capacity at a different participating customer to meet this requirement.
- The amount of produced kWh/a from the PV system per participating customer must not exceed twice the yearly electricity consumption of this participating customer.
- The investor is allowed to wheel the electricity between the participating customers according to Government Gazette No 41237 of 10 November 2017. Please also see Annexure A
- The produced electricity shouldn't exceed the overall electricity consumption of all participating customers, since the municipality will not buy excess energy.
- Third party arrangements with licensed power traders will not be allowed, to sell excess energy.
- The total duration of this project is 25 years.
- Lost yield due to grid faults or maintenance will not be compensated by the municipality.

The NMBM will not be signing a Power Purchase Agreement (PPA) with the Investor, but will only facilitate the flow of money between the Investor and the participating customer (i.e. the NMBM will invoice, and collect the money from the participating customers on behalf of the Investor). The payment to the investor will be on the usual payment conditions of the municipality (which is normally within 30 days).

It will be the responsibility of the Investor to enter into the necessary agreements with the participating customer,

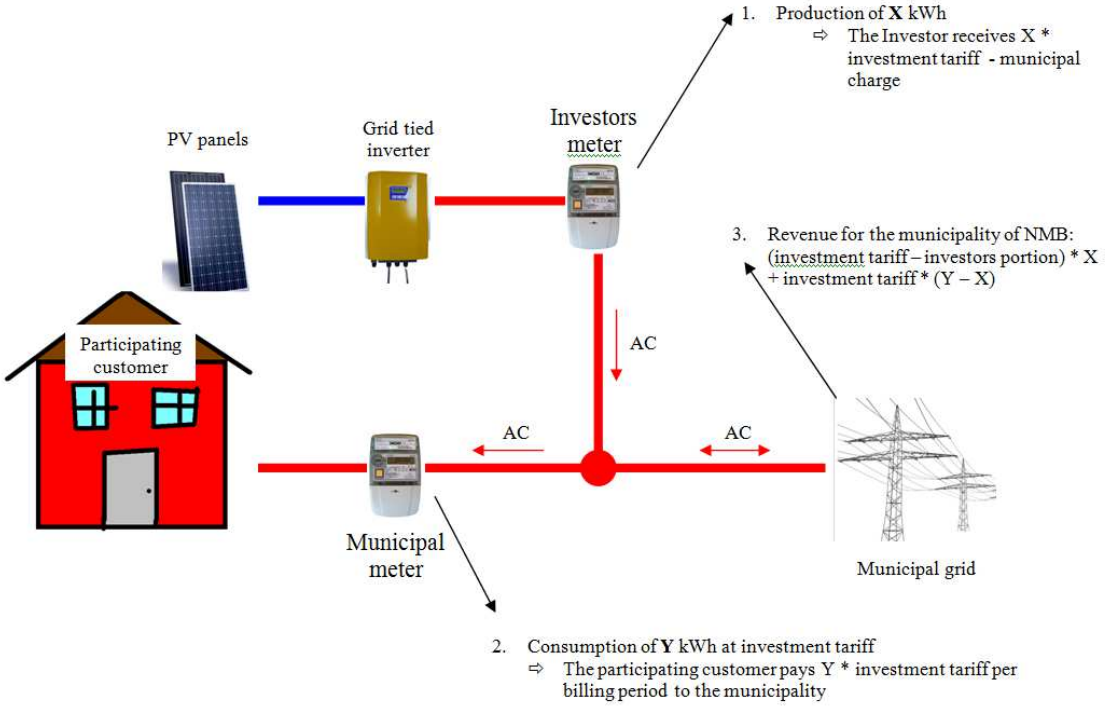

Figure 1: Concept schematic

In order to ensure proper coordination of such a roll-out given the nature of the envisaged model, the NMBM established a management entity with the sole purpose of assisting in the preparation of this program, managing the roll out and monitor the quality and progress of the embedded generation program. For the investor relevant functions of the management entity will include:

(a) Preparation and maintenance of a database that will house all information with regards to individual installations, investor data and transactions.

(b) Developing the overall project rollout plan with the individual plans from all investors, including rules of engagement between investors and potential customers, approval of installation sites to investors, etc. Consideration of all applications from investors.
(c) Confirmation of network capacity.
(d) Approval of equipment tests (Approve equipment and perform type testing if required)
(e) Ensure compliance with NRS 097.
(f) Sample testing of installations to confirm that they comply with NRS 097 and other requirements.
(g) Approval of engagement contract (participating customer agreement) between participating customer and investor.
(h) Collect metering data and certify payments to investors and the municipality.
(i) Monthly statistical reporting
(j) Interfacing between investors and the NMBM, e.g. approval of installations, inspection of installations, disconnections, etc.

5 SCOPE OF WORK

The Investor shall supply and install an embedded energy generation system to property owners (participating customers) free of charge. The investor shall conclude an agreement with the participating customer for the supply and installation of the system which shall be fixed on the participating customer's property. The investor is responsible for any cost regarding the connection of the system to the municipal grid, including required upgrades of supply cables or circuit breakers if required. The performance of the system is also the responsibility of the investor. NMBM will not own the system or be responsible for it in any way.

To ensure a correct billing the investor has to install a metering device at each installation to measure his electricity production. All meters must be calibrated and the municipality provided with the calibration certificate. At the end of each month the investor will forward the total bill for his electricity production to the municipality, as well as the data of how much electricity was produced on each of his client's sites. This data must be in Excel format and show the daily production for each day of the month on each installation site. In addition the investor must forward the raw data from all of his meters to the municipal server at the end of each month in CSV format.

This metering device must fulfill following criteria:

(a) 100 days data storage

(b) Data capturing in intervalls of 30 min.

(c) Real time clock

(d) Output signal to control the inverter and (for future purposes) Battery backup

(e) SANS 474

(f) On the municipal list of approved meters

It is also the responsibility of the investor to maintain the system for the contract period at his own costs.

After the contract period the investor will own the system and has to remove it free of charge if no other written arrangements have been made. The municipality and the participating customer will not be charged for additional costs by the investor or any third party unless other arrangements have been made in writing.

The investor shall be reimbursed through a green energy tariff to be established and managed by the NMBM ("the Investor tariff") for the system. The therefore established investment tariff will include a

portion dedicated towards the payment of the municipality. All parties will receive payment in the same manner and on the same terms, which prevents any financial burden being placed on the NMBM.

The Investor will receive 1.16 ZAR / KWh generated by participants in the Embedded Generation Programme and the municipality 0.44 ZAR / KWh.

Any increase on this tariff will be split between the investor and NMBM in the same ratio. The investor will receive 70% of the increase and NMBM 30%.

The yearly tariff increase for the investor is limited to CPI.

Example 1: The annual electricity tariff increase is 5%, CPI 4.3%
New investment tariff = 1.6 x 1.05 = 1.68 Rand
Investors payment per kWh = 1.216 Rand
NMBM payment per kWh = 0.464 Rand

Example 2: The annual electricity tariff increase is 8%, CPI 4.3%
New investment tariff = 1.6 x 1.08 = 1.728 Rand
Investors payment per kWh = 1.2288 Rand
NMBM payment per kWh = 0.4992 Rand

The implemented Tariff for electricity consumed by Participating Customers shall be reviewed annually subject to the approval of Nersa.

5.1 To ensure a high installation standard following regulations have to be followed by the investor:

(a) Detailed information of the PV-systems position including GPS coordinates and pictures.
(b) For each installation a PV GreenCard has to be filled out (see Attachment)
(c) The connection point to the grid of NMBM must be fixed.
(d) Each installation must have a DC isolator.
(e) Functionality must be tested every 12 month, especially the decoupling safety equipment.
(f) Operation and maintenance must be carried out under existing technical rules and regulations
(g) If the PV-system has any negative effect to the municipal grid, the investor has to provide and install solutions on own cost. This solution must be approved by the municipality.

5.2 General information

(a) Respond time of NMBM/Management entity for installation approval will not be more than 3 working days.
(b) The captured data must be available to NMBM and the management entity at any given time.
(c) The data of the meter for the PV-production must be taken in periods not longer than 30min.
(d) The management entity will collect all data and prepare invoices for all parties on a monthly base.
(e) Under following conditions the system will be shut off by the municipality:
    i. Unauthorized utilization of the grid
    ii. Technical or safety defects
    iii. Connection of a third party without approval

6 REGULATIONS AND STANDARDS

List of regulatory approvals, requirements and references that the installation must comply with: (note that the latest version of all of the below standards are applicable)

NRS 097-2 : Grid interconnection of embedded generation: Part 1: Utility interface Part 2: Small scale embedded generation
SANS 10142- Parts 1 to 4: The wiring of premises (as amended and published)
Occupational Health and Safety Act, Act No. 85 of 1993, as amended
Electricity Regulation Act, Act 4 of 2006 and Electricity Regulation Amendment Act, 2006
NRS 057(SANS 474) : Code of Practice for Electricity Metering
PV GreenCard

7 MINIMUM REQUIREMENTS

Failures to fully provide any one (1) of these minimum requirements in this section will render as non-responsive and therefore will be regarded as a disqualification.

No.	Requirement	Submitted	
		Yes	No
1	Proof of minimum 3 years experience (investor or partner) in the design of PV-home-systems and installation of those.		
2	Proof of minimum 3 years experience (investor or partner) in project management with a project value of minimum 10 MRand		

8 FUNCTIONALITY CRITERIA

Points will be awarded for each bullet point according to a prior scale of point value matrix.

A minimum of 770 points must be attained for further consideration/evaluation.

Functionality Criteria	**Points Allocated**			**Max Score**
1. General				
1.1 Presence and capacity of a local office	In NMB	Within 200 Km around NMB	Further away	40

	40 Points	20 Points	0 Points	
1.2 South African Entity Participation	0 < 40%	40% < 70%	70% < 100%	21
	0 – 7 Points	8 -14 Points	15 - 21 Points	
1.3 Local content Please indicate how many percent of the used labor for installations will be from: (will be verified on site during implementation. Non compliance may result in contract being voided and parts of the refundable application fee being kept as reimbursement)	NMB	SA	World wide	95
	0.95 Points per percentage	0.3 Points per percentage	0 Points	
1.4 Local content Please indicate how many percent of the used material will be provided by local companies: (will be verified on site during implementation. Non compliance may result in contract being voided and parts of the refundable application fee being kept as reimbursement)	NMB	SA	World wide	65
	0.65 Points per percentage	0.25 Points per percentage	0 Points	
1.5 Local content Please indicate how many percent of the used material will be produced in: (will be verified on site during implementation. Non compliance may result in contract being voided and parts of the refundable application fee being kept as reimbursement)	NMB	SA	World wide	61
	0.61 Points per percentage	0.25 Points per percentage	0 Points	
1.6 Project Organogram and Structure Investors must submit an Organogram, indicating project team structure, lead member of consortium. The Organogram must include the top five management positions of the investor's team (Financial, Legal, Technical, Project Management & QHSE).	Poor	Satisfactory	Good	33
	0 - 14 Points	15 - 25 Points	26 - 33 Points	

1.7 Preliminary Programme of Works A detailed project plan with anticipated timeframes has to be submitted for each phase of the programme	Poor	Satisfactory	Good	89
	0 - 35 Points	36 - 70 Points	71 - 89 Points	
			Sub Total =	
2. Financial				
2.1 Financial Model For installation and maintenance of the system for the next 20 years	Poor	Satisfactory	Good	100
	0 - 39 Points	40 - 79 Points	80 - 100 Points	
2.2 Planned funding arrangements	Poor	Satisfactory	Good	100
	0 - 39 Points	40 - 79 Points	80 - 100 Points	
			Sub Total =	
3. Investor's Experience				
3.1 Technical experience in operating/maintaining of such PV systems, which have a combined capacity of not less than 300kW	< 3 Years	3 to 5 Years	> 5 Years	30
	0 - 12 Points	13 - 23 Points	24 - 30 Points	
3.2 Development and implementation of such PV systems, with a combined capacity of not less than 300kW	< 3 Years	3 to 5 Years	> 5 Years	39
	0 - 15 Points	16 - 30 Points	31 - 39 Points	
3.3 Project management of any project with similar investment costs	< 3 Projects	3 to 5 Projects	> 5 Projects	47
	0 - 15 Points	16 - 36 Points	37 - 47 Points	
			Sub Total =	

4. Experience of Key Personnel				
4.1 Team Leader CV of the relevant person comprising:	< 5 Years	5 to 10 Years	> 10 Years	26
4.1.1 General experience (in the relevant field)				
	0 – 3 Points	4 – 9 Points	10 – 14 Points	
4.1.2 Qualification (in the relevant field)				
	0 – 2 Points	3 – 5 Points	6 Points	
4.1.3 Training (in the relevant field)				
	0 - 2 Points	3 - 5 Points	6 Points	
4.2 Technical Specialist in PV CV of the relevant person comprising			Total points available:	31
4.2.1 general experience in planning, installing and maintaining of such systems	< 5 Years	5 to 10 Years	> 10 Years	
	0 – 4 Points	5 – 12 Points	13 – 16 Points	
4.2.2 qualification in RE especially in PV				
	0 - 2 Points	02 - 6 Points	7 - 8 Points	
4.2.3 training of the last 15 years in: - RE, especially in PV or - wiring of DC and AC installations - generators - Inverters	0-2 training courses	3-6 training courses	>6 training courses	
	0 - 2 Points	02 - 6 Points	7 Points	
4.3 Technical Specialist in Data management CV of the relevant person comprising 1. general experience in data capturing and analyses, 2. qualification in data management and programming,	< 5 Years	5 to 10 Years	> 10 Years	5
	1 Points	3 Points	5 Points	

3. training in data management systems In order to score points, for each bullet point proof has to be provided. The second lowest proof will determine the years of experience.				
4.4 Project Management Lead CV of the relevant person comprising 1. general experience in projects with more than 20 people, 2. qualification in project management and 3. training in project management In order to score points, for each bullet point proof has to be provided. The second lowest proof will determine the years of experience.	< 5 Years	5 to 10 Years	> 10 Years	26
	0 - 8 Points	9 - 19 Points	20 - 26 Points	
4.5 Financial Lead CV of the relevant person comprising 1. general experience, 2. qualification and 3. training In order to score points, for each bullet point proof has to be provided. The lowest proof will determine the years of experience.	< 5 Years	5 to 10 Years	> 10 Years	13
	0 - 4 Points	5 - 10 Points	11 - 13 Points	
4.6 Legal Lead CV of the relevant person comprising 1. general experience, 2. qualification and 3. training In order to score points, for each bullet point proof has to be provided. The lowest proof will determine the years of experience.	< 5 Years	5 to 10 Years	> 10 Years	13
	0 - 4 Points	5 - 10 Points	11 - 13 Points	
			Sub Total =	
5. Project Management				
5.1 Project Management Plan	Poor	Satisfactory	Good	66

Plan of Project Management methods, processes and systems, client reporting				
	0 - 19 Points	20 - 46 Points	47 - 66 Points	
5.2 Risk Management Plan Plan of Risk Management processes and systems, client reporting	Poor	Satisfactory	Good	66
	0 - 19 Points	20 - 46 Points	47 - 66 Points	
			Sub Total =	

6. B - BBEE Status									
6.1 B – BBEE status	1	2	3	4	5	6	7	8	100
	100	90	60	50	40	30	20	10	

TOTAL POINTS	**/ 1066**

9 EVALUATION PROCESS

All proposals will be evaluated by an evaluation team for functionality. Based on the results of the evaluation process, the awarding of the contract to successful companies will take place.

A two-phase evaluation process will be followed.

- The first phase includes evaluation of minimum criteria.
- The second phase includes the evaluation of the functionality criteria.

Only proposals that achieved the specified minimum qualification scores for functionality will be further considered.

The company with the highest scoring will be the preferred investor and choose the capacity they want to sign up for. This process will be repeated until the total allocated capacity of 250 MW is awarded.

Per company a maximum of 100 MW will be allocated.

Investors may be operating in parallel.

The appointed companies will get access to the data list of the municipality with potential customers in the municipality.

10 RETURNABLES

Signed Agreement between the investor and NMBM	Annexure A
Flow-through Diagram confirming SA Entity Participation	Annexure B
Company Profile(s)	Annexure C
CVs of Key Personnel	Annexure D
Key Reference Projects	Annexure E
Project Plan	Annexure F
Risk Management Plan	Annexure G
Financial Model	Annexure H
Project Organogram	Annexure I
Data sheets of main components to be used for the installations	Annexure J
If points for local content are claimed, evidence or/and detailed description must be provided on how this will be achieved.	Annexure K
BBBEE certificate	Annexure L
Original and valid Tax Clearance Certificate	Annexure M
Municipal Rates/Billing Clearance Certificate	Annexure N
Documents of Incorporation of Company, C.C Pertnership or Joint Venture	Annexure O
V.A.T. Registration Number	Annexure P
Proof of registration with NMBM Supplier database	Annexure Q

11 AGREEMENTS

There will be an application fee of 25.000 Rand for each application. This application fee is non refundable.

After approval of the submitted documents the investor is liable to a second, refundable application fee of 0.02 Rand/W for the capacity he would like to sign up for, e.g. if an investor applies for 5MW of the 250MW he has to pay a 100.000 Rand application fee. This application must be supplemented by an implementation plan. In case of non performance and repeated notification by the municipality, the municipality reserves the right of reallocating the amended capacity to other investors and keep the fee as reimbursement.

The Investor will be required to enter into an Agreement (MoA) with the municipality, which allows the municipality to collect and forward the revenue from the installed systems to the investor.

This program allows the investor to produce electricity, wheel it through the municipal grid to his clients and use it on site according to Government Gazette No 41237 of 10 November 2017. The municipality will not buy surplus electricity from the investor.

During the first year of installation the net metering between produced electricity and consumed electricity will be done on an annual base. After that first year the net metering will be done on a monthly base. The first year starts with each investor after connection of his first installation.

The investor shall be reimbursed through the investment tariff, which includes a portion dedicated towards the payment of the municipality.

All parties receive payment in the same manner, and on the same terms, which prevents any financial burden being placed on the NMBM.

The billing will be done on a monthly base at the end of each month. The payment to all involved parties will be made under the normal payment conditions of the Nelson Mandela Bay Municipality (which are 30 days).

The Investor will receive 1.16 ZAR / KWh generated by participants in the Embedded Generation Programme and the municipality 0.44 ZAR / KWh.

Any increase on this tariff will be split between the investor and NMBM in the same ratio. The investor will receive 70% of the increase and NMBM 30%.

The yearly tariff increase for the investor is limited to CPI.

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NMBM payment per kWh = 0.4992 Rand

The implemented Tariff for electricity consumed by Participating Customers shall be reviewed annually subject to the approval of Nersa.

The municipality allows a connection of 50% renewable energy power per substation, if this capacity wants to be exceeded by the investor, permission from the municipality has to be requested by the investor.

The maximum installation size of a PV system is limited for each participating customer according to the NRS 097 standard. If this limitation wants to be exceeded by the investor permission from the municipality has to be requested by the investor.

NMBM may at any time terminate the agreements with the Investor by giving written notice if the Investor becomes bankrupt or otherwise insolvent. In this event the prosumers of this Investor will be switched back to their previous electricity tariff.

12 APPOINTMENT PERIOD

The Agreement between the investor and NMBM will be for a period of 25 years.

During that time the investor can conclude PPA with customers, which are not exceeding the agreement period between the investor and NMBM

13 TIME FRAMES

Application opening Date:	XXXXXXX
Application Closing Date:	XXXXXXX
Briefing Date & Time:	Appointments can be made between XXXXXX and XXXXXX
Briefing Location:	Munelek Building, 46 Harrower Rd., North End, Port Elizabeth

14 LIABILITY

No cost will be covered by NMBM. Not for the preparation of the documentation either after the appointment of the investors.