

PORTFOLIO COMMITTEE :

INFRASTRUCTURE SERVICES

Acting Chairperson :

Cllr R Nutt

Committee Members :

**Ald R de Coning, Cllrs S Fourie,
M Sihlahla & V Bandeza**

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

**1.
OVERSTRAND MUNICIPALITY: WHEELING OF ENERGY**

**SU Muller
9 February 2025**

Chief Engineer: Infrastructure Services

(028) 313 8019

1. Executive Summary

The purpose of this item is to inform council about wheeling of energy as a Municipal service.

Wheeling is the delivery of electrical energy from a power producer to an end-user through a distribution or transmission network. Wheeling allows independent power producers (**IPPs**) to sell electricity directly to customers while using the municipality's electricity network.

2. Service Delivery and Budget Implementation Plan - IGNITE

Directorate of Infrastructure Services
Electrical Services Division

3. Compliance with Strategic Priorities

Provision of democratic, accountable and ethical governance
Provision and maintenance of municipal services
Creation and maintenance of a safe and healthy environment
Promotion of tourism, economic and social development

4. Delegated Authority

None

5. Legal Requirements

Electricity Regulation Act.

6. Background/Discussion/Evaluation/Conclusion

6.1 Background

Wheeling is the delivery of electrical energy from a power producer to a client (also referred to as off taker or end-user) through an electrical distribution or transmission network. Wheeling allows Independent Power Producers (IPPs) to sell electricity directly to customers, while paying for the use of the electricity grid owned by a third party (e.g. a municipal distributor or Eskom) through use-of-system (**UOS**) charges.

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

6.2 Discussion

In recent year there has been an increase in the generation of electrical energy by IPPs, mostly from renewable energy sources. This has given rise to an increase in the need for energy wheeling.

6.3 Legal and Regulatory framework for Wheeling

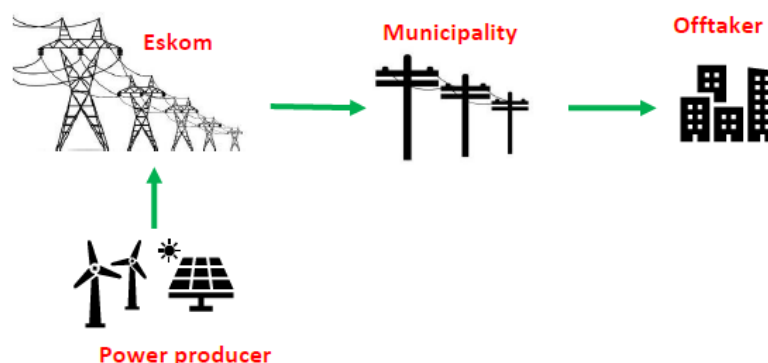
The Electricity Regulation Act (**ERA**) states that “A transmission or distribution licensee must, to the extent provided for in the license, provide non-discriminatory access to the transmission and distribution power systems to third parties.” Furthermore, the Act states that access must be provided on the conditions set out in the license of the distributor.

Distributor license conditions consist of financial, legal, and technical conditions. The municipality is thus obligated to allow third-party access to the grid, but must adhere to their license conditions. According to the ERA, a Municipality may only refuse access to connect a generator or a customer where the network lacks the necessary capacity, with written reasons given for refusal, and that any party requesting information on network capacity and measures to reinforce the network may be charged a reasonable fee reflecting the cost of providing such information.

6.4 Wheeling scenarios

Scenario 1

Eskom connected generator wheeling to a Municipal off taker.



In this wheeling scenario, the generator is located outside the municipality's network, and the off taker is situated within the municipality's network. As such, the wheeled energy travels across Eskom's network and the Municipality's network, meaning that UOS charges will be paid for Eskom's transmission and/or distribution network and the Municipality's distribution network. This

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

scenario requires the generator to comply with the Eskom's connection requirements and the Generator must apply to Eskom for the grid connection.

The following agreements will need to be put in place in this scenario:

- An amended supply agreement between Eskom and the Municipality to reflect that wheeling credits will be added to the bill.
- An amended electricity supply agreement between the Municipality and the off taker to reflect that wheeling credits will be added to the bill. The off taker pays UOS charges for all wheeled energy.
- A power purchase agreement (PPA) between the Generator or Trader and the off taker.
- A Connection and Use of System agreement between the generator and Eskom to reflect the allocation of the total energy exported to the grid to be credited to the off taker and the legal and technical conditions for use of the grid.

Implementing wheeling from Eskom-connected generators has a range of benefits which include:

- Generators can be located in areas with high renewable energy resources, which may be far from the off taker.
- Eskom's transmission network typically has capacity for much larger generators than municipal networks, even though there are grid capacity challenges in certain areas.
- Eskom has more experience than municipalities with connecting large generators to the grid, including grid code compliance, meaning that generator connection can be expedited.
- Eskom has a wheeling framework in place to pass the wheeling credits onto the municipal account.

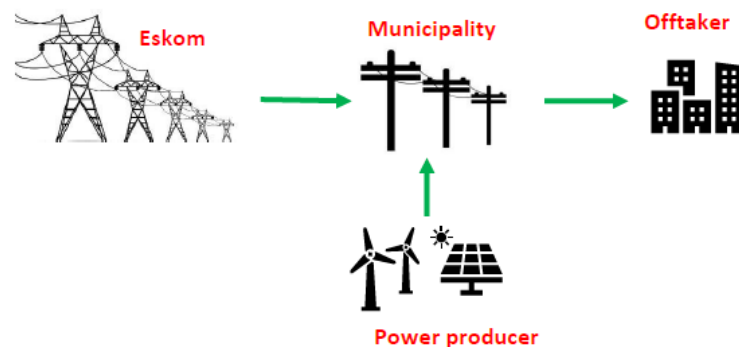
While our Municipality may be looking to facilitate wheeling from Eskom-connected generators, Eskom may require an updated deposit and the signing of a new supply agreement. Eskom recently made an announcement that the security deposit will be waived on a case-by-case basis for municipalities in good financial standing. A second important development for this scenario is that of Eskom's Virtual Wheeling Platform with the intention that this model will overcome the security deposit issue and simplify billing for wheeling to municipal off takers. Eskom is currently piloting the Virtual Wheeling Platform and it is expected that this model will only become publicly available in at least 12-24 months' time.

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

Scenario 2

Municipal-connected generator wheeling to a Municipal off taker.

In this wheeling scenario, the Generator is located within the Municipality's network, and the off taker is also situated within the same Municipality's network. As such, the wheeled energy does not travel across Eskom's network, meaning that only the Municipality's distribution UOS charges must be paid by the off taker. This scenario requires the Municipality to process the Generator's connection application as it will be connected to the Municipality's grid.



The following agreements will need to be put in place in this scenario:

- The Generator has a Connection and Use of System agreement with the Municipality.
- The Off taker signs an Amended Electricity Supply Agreement with the Municipality.
- The Generator or Trader and the off taker must conclude a Power Purchase Agreement (**PPA**).

There are a range of benefits to wheeling from a local generator connected to the Municipal network. These include:

- Reduced wheeling transaction costs as the generator avoids paying Eskom UOS charges.
- Reduced electrical losses as the electricity does not flow across the transmission grid.
- Reduced reliance on Eskom's transmission grid which has been slow to accommodate new generation capacity.
- Local generation reduces the Municipality's reliance on energy purchases from Eskom.

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

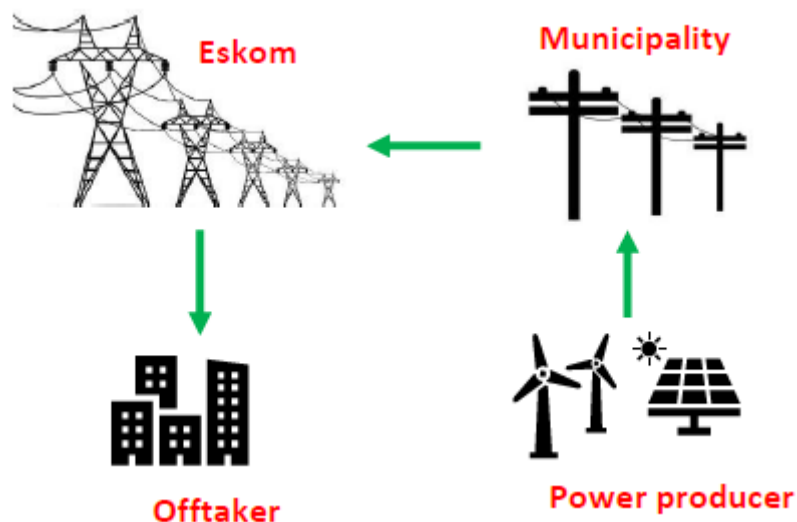
- Building power plants in the Municipality stimulates the local economy and creates jobs.

However, challenges for Municipalities in implementing such “embedded wheeling” include the lack of experience in connecting large generators to the distribution grid, and the Municipality’s billing system requires updating to facilitate the reconciliation of wheeled energy between the Generator and the off taker. The Municipality’s distribution network may have limited capacity available to accommodate large, embedded generators to wheel. Load shedding will also have an impact on Wheeling as power cannot be wheeled while load shedding is in progress.

Scenario 3

Municipal-connected generator wheeling to Eskom-connected off taker or a municipal off taker in another municipality.

In this wheeling scenario, the Generator is located within the municipality's network, and the off taker is situated outside the municipal network, either within another municipality or on Eskom’s network. This scenario requires the Municipality to process the Generator’s connection application as it will be connected to the Municipality’s grid.



This may become a relevant scenario in certain circumstances, however, there is currently no mechanism for the energy credits to be transferred from one municipality to another, or from a municipality to Eskom. As such, this scenario is only included for completeness, and more work will be required to implement this scenario. The supply agreements would need to be amended and the

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

credits would be passed from the municipality with the IPP to the municipality with the off taker. There is no technical reason this scenario cannot happen, but the concept is yet to be proven.

6.5 Technical considerations

6.5.1 Generator Connection Process

The regulatory framework for connecting generators to the grid is now well established. Generators applying to connect to Eskom's grid will need to follow Eskom's grid connection process, which has recently been updated. Generator's applying to connect to a municipal grid will be assessed in line with the municipality's existing embedded generation connection process. The same process remains applicable in the case of generators connecting to wheel electricity. Connecting generators with capacities of 1 MW or higher is more complex and involves a lengthy set of approvals. A step-by-step explanation of the process municipalities follow to connect 1MW generators and larger has been developed by SALGA and is available to the Municipality.

In addition, to fulfilling the requirements of the network operator, generators intending to wheel may require NERSA registration. The January 2023 Schedule 2 of the ERA4 exempts generators less than 100kW connected for the purpose of wheeling from NERSA registration or licensing, while generators greater than 100kW built for the purpose of wheeling do require NERSA registration. The licensing requirement for generators that are involved in private sale has been removed entirely. Licencing is still a requirement for IPPs selling energy to organs of state.

6.5.2 Metering and Billing

The billing and metering requirements of wheeling vary depending on the wheeling scenario (i.e. where the generator and off takers are connected), the number of generators and off takers (one-to-one or many-to-many), the billing period (time-of-use or half-hourly), and the municipality's wheeling policy. Metering should provide at least hourly information per time-of-use (**TOU**) period and the billing system may need to be updated and configured to accommodate wheeling.

To enable this billing process, generators and off takers are required to install TOU bi-directional AMI meters in line with the SANS 474 and the NRS 049. Municipal billing systems upgrades are generally required to facilitate the reconciliation of wheeled energy - these billing system upgrades have proven to be a challenge for many municipalities. Because electricity billing typically forms part of the larger municipal billing system for water, sewerage, rates, etc., upgrading the billing system for wheeling has proven to be a challenging task.

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

Senior staff buy-in and budget are critical to drive the process. There is work underway to understand this issue to guide municipalities through the steps to update their billing systems. Open-source billing software may emerge as a potential solution to this challenge.

6.5.3 Hourly versus Monthly reconciliation

Municipalities can make the decision to do half-hourly or hourly or monthly reconciliation of wheeled energy. Monthly is where the wheeled energy is added up per TOU period and credited on the bill as a summed amount. Hourly is more complex where each half hour or hour is reconciled against consumption and generated energy. There are advantages and disadvantages to both.

Monthly billing means that all energy generated during a certain TOU period for a given month will be offset against the off takers' energy consumption for that same TOU period for the month. As such, generation and consumption do not necessarily need to match in real time. However, because it is not real-time reconciliation there is the potential for wider system-level imbalances resulting from the mismatch in generation and consumption. However, Eskom is comfortable that the introduction of a balancing market will eventually resolve this issue.

Half-hourly billing means that generation and consumption reconciliation is done for each half hour, so any energy generated and not consumed by the off taker within the half hour becomes surplus energy fed into the grid. Half-hourly billing increases the risk of excess energy generation e.g., if the off taker is load shed, or a shortfall of generation e.g., if the generator is curtailed. Because of the shorter billing period, excess energy is more likely with half-hourly billing, meaning it is much more important to accompany it with a mechanism to purchase the excess energy.

The method of reconciliation in the billing system has a material impact on the size of generation for a given off taker. As an example, monthly TOU billing allows a typical industrial off taker to receive up to 20-25% more wheeled energy credits from a solar generator before excess energy is generated. As such, despite the monthly TOU billing approach not accurately representing the likely future energy market, it is an important mechanism to leverage capacity onto the grid in the short term.

It is recommended that monthly billing reconciliation be done until the Municipal billing system is ready for hourly or half-hourly reconciliation.

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

6.1 Financial considerations

6.6.1 Wheeling Tariffs

Wheeling customers use the grid to transport the wheeled energy from the generator, and these network costs must be recovered through a wheeling tariff, or a UOS charge. Municipalities have had difficulties getting their wheeling UOS tariffs approved by NERSA. NERSA has stated that the lack of a wheeling framework means they do not have anything upon which to base wheeling tariff approvals.

To avoid the need for implementing a new tariff in order to wheel, municipalities are employing a “wheeling credit” method which utilises existing tariffs to recover UOS charges. Instead of explicitly charging a UOS charge on the wheeled energy units, the customer is charged full retail tariffs for all energy consumed (wheeled and non-wheeled) and a rebate is later given for wheeled energy.

The two UOS tariff approaches for wheeling – the explicit UOS charge and the “wheeling energy credit method” are shown in Figure 1 below. Under both approaches, fixed and demand charges remain unchanged. The only changes occur on the energy account (R/kWh charges).

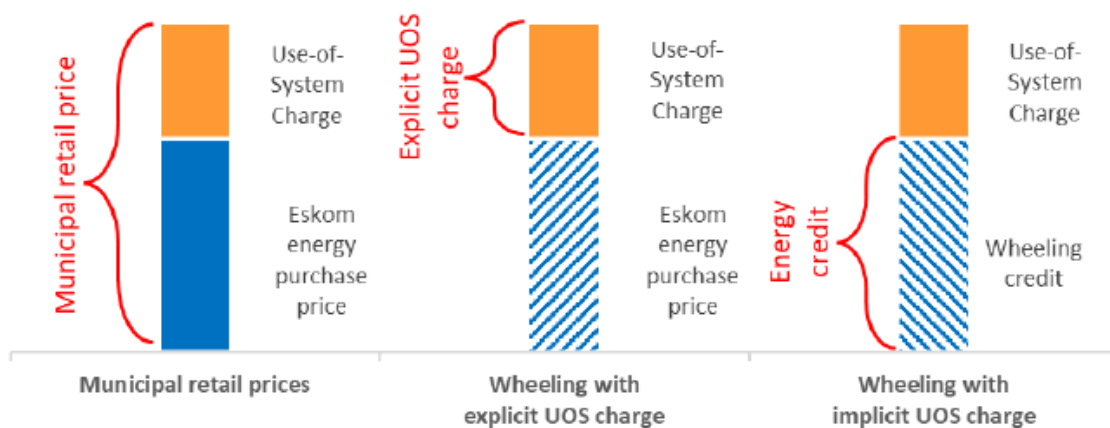


Figure 1: Graphical representation of wheeling billing alternatives

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

Explicit Use-of-System Charges

Under this approach, the customer receiving wheeled electricity pays an explicit UOS charge for each unit of wheeled energy. The UOS charge should equate to the municipality's existing retail tariffs less Eskom's energy purchase costs. As such, the UOS charge covers all approved fixed charges, demand charges and energy charges including contribution to regulated surpluses.

$$UOS\ Charge = Municipal\ Energy\ Tariff - Eskom\ Energy\ Purchase\ Price$$

Implicit Use-of-System Charges – “wheeling credit method”

This approach aligns with Eskom's existing wheeling methodology whereby the off takers' energy account is credited to the value of the wheeled energy received. The wheeling energy credit is to the value of the wholesale electricity pricing structure (WEPS) less losses. For generators connected to Eskom's network, these credits will be passed onto the Municipal account which will then be relayed onto the Off takers' account. For generator's connecting to the Municipal grid, the Municipality will generate the wheeling credits based on the amount of energy metered at the Generator's supply point.

Active energy charge excluding losses [c/kWh]											
High demand season [Jun - Aug]						Low demand season [Sep - May]					
Peak		Standard		Off Peak		Peak		Standard		Off Peak	
	VAT incl		VAT incl		VAT incl		VAT incl		VAT incl		VAT incl
563.54	648.07	170.71	196.32	92.70	106.61	183.83	211.40	126.52	145.50	80.25	92.29

Figure 2: Eskom 2024/25 wheeling credit rate

The billing process is outlined as follows:

- Full tariff charges (i.e. normal non-wheeling retail tariffs) are raised for all the energy supplied through the meter, both the utility sold energy and the wheeled energy. These tariffs include all approved fixed charges, demand charges, and all energy charges including contribution to regulated surpluses.
- The wheeled energy is then credited on the customer bill using the kWh allocated to the off takers' account multiplied by WEPS less losses.
- The effective UOS charge for wheeled energy is therefore the full tariff charges (i.e. normal non-wheeling retail tariffs) minus the Eskom energy purchase price.

The energy credit method is a simpler billing process and does not require an introduction of a new UOS tariff. The UOS charge is already recovered through normal prices, and the billing system is adjusted to credit the customer at the WEPS less losses credit rate for all energy wheeled less losses, since the

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

municipality did not have to purchase this electricity from Eskom and recognize the cost of line losses.

The energy credit method requires that all wheeling customers must be on a TOU tariff and should be billed in full for all energy received (wheeled and non-wheeled energy). At the end of the billing period, the wheeling customer should be credited for all wheeled energy received excluding losses at Eskom's WEPS TOU energy rate less losses.

6.6.2 Impact of Wheeling on Municipal Revenue

Municipal officials are understandably cautious about the potential revenue loss associated with wheeling, as this revenue is a critical source of income for service delivery. When a customer receives wheeled energy, they continue to pay all fixed and demand charges, and all surplus recovered through energy charges.

Only the pass-through energy account changes to reflect the wheeled energy. With reference to Figure 1 above, and using an example of a customer consuming 100 kWh, the following observations can be made:

- Municipal revenue before wheeling = $100 \times (\text{Municipal tariff}) - 100 \times (\text{Eskom purchase price})$
- Municipal revenue after wheeling = $100 \times (\text{UOS charge})$

And where the UOS charge = Municipal tariff – Eskom purchase tariff,

- Municipal revenue after wheeling = $100 \times (\text{Municipal tariff} - \text{Eskom purchase price})$

And therefore, municipal revenue before wheeling equals the municipal revenue after wheeling.

A comprehensive revenue modelling exercise was undertaken by Sustainable Energy Africa for the Western Cape Government to evaluate the impact of wheeling on municipal revenue. It was found that if municipalities employ the “wheeling credit method” (the method proposed in this policy) they will see no reduction in revenue from wheeling.

6.6.3 Payments Due

The generator or off taker may be responsible for the following upfront payments:

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

- The installation of smart meters (under the Municipality's metering policy/requirements)
- Generator connection charges (if applicable)
- Generators may be required to perform grid impact studies (these studies may be outsourced to a power system consultant and costs tend to vary)
- Any upgrades required to the municipal electrical network upstream of the connection point due to the connection of the generator.

6.7 Conclusion

Given the worldwide trend to mitigate climate change by transitioning to a low carbon economy, Eskom's inability to provide sufficient energy, and the government's new energy regulations, it is essential that the municipality make use of the current opportunities to transition its energy supply to renewable sources and reduce its dependency on Eskom.

Recent changes to the country's energy regulation empowers municipalities to allow wheeling of energy on their electrical networks. This opens opportunities for the municipality to transition from dependence on Eskom to renewable energy produced by Independent Power Producers.

7. Financial Implications

A comprehensive revenue modelling exercise was undertaken by Sustainable Energy Africa for the Western Cape Government to evaluate the impact of wheeling on municipal revenue. It was found that if municipalities employ the "wheeling credit method" (the method proposed in this policy) they will see no reduction in revenue from wheeling. If additional admin costs are brought about by wheeling e.g., for metering and billing, the municipality may add a wheeling administration charge to recover these costs.

8. Staff Implications

None

9. Comments from other Departments, Divisions and Administrations

None

10. Annexures

Annexure A: Wheeling of Energy Policy

**AGENDA of the
Portfolio Committee : Infrastructure Services
9 April 2025
(Also the agenda for the Mayoral Committee Meeting : 16 April 2025)**

RECOMMENDATION TO THE COUNCIL:

1. that Council notes the report related to wheeling as a Municipal service;
2. that Council approves the proposed Wheeling Policy;
3. that Council approves the proposed monthly reconciliation billing methodology until the billing system can reconcile hourly or half-hourly; and
4. that Council approves the Eskom Wholesale Electricity Structure (WEPS) less losses as the method/tariff to credit customers for wheeled energy.

RESPONSIBLE OFFICIAL :

G LOTTER

TARGET DATE FOR IMPLEMENTATION :

N/A

**AGENDA of the
Portfolio Committee : Infrastructure Services
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**1.
OVERSTRAND MUNICIPALITY: WHEELING OF ENERGY**

**SU Muller
9 February 2025**

Chief Engineer: Infrastructure Services

(028) 313 8019

THIS MATTER SERVED BEFORE THE JOINT PORTFOLIO COMMITTEE ON 9 APRIL 2025, WHICH COMMITTEE RECOMMENDED AS FOLLOWS:

RECOMMENDATION TO THE COUNCIL:

1. that Council notes the report related to wheeling as a Municipal service;
2. that Council approves the proposed Wheeling Policy;
3. that Council approves the proposed monthly reconciliation billing methodology until the billing system can reconcile hourly or half-hourly; and
4. that Council approves the Eskom Wholesale Electricity Structure (WEPS) less losses as the method/tariff to credit customers for wheeled energy.

RESPONSIBLE OFFICIAL :

G LOTTER

TARGET DATE FOR IMPLEMENTATION :

N/A

OVERSTRAND MUNICIPALITY



WHEELING OF ENERGY POLICY

February 2025

A2/b

CONTENTS

1. INTRODUCTION..... 3

2. DEFINITIONS..... 3

3. SCOPE OF GUIDELINE..... 4

4. LEGAL AND REGULATORY FRAMEWORK..... 5

5. WHEELING SCENARIOS 6

6. APPLICATION PROCESS..... 8

7. ANNEXURE A: REQUIREMENTS OF THIRD-PARTY ENERGY PROVIDER 9

8. ANNEXURE B: ACCOUNTING 11

1 INTRODUCTION

This policy describes the process and requirements for Renewable Power Producers (RPPs) to wheel electrical energy on the Overstrand Municipality (Overstrand) distribution grid (Grid). The policy sets the requirements to enable wheeling and energy trading in Overstrand. The guideline sets the parameters of capacity allowed on the network and does not limit or restrict the number of consumers. This policy will be regularly reviewed and amended, as technical capacity is built through approved applications by RPPs.

2 DEFINITIONS

Electrical Department	The Electrical Department of the Overstrand Municipality.
Chief Engineer	The Chief Engineer, Infrastructure Services, Overstrand Municipality
Distribution	The conveyance of electricity through a distribution power system excluding trading. 'distribute' and 'distributing' have corresponding meanings;
Distribution power system	A power system that operates at or below 132kV;
End user	A user of electricity or a service relating to the supply of electricity
Energy regulation act (ERA)	National Energy Regulator Act, 2004 (Act 40 of 2004);
Energy credit	The monetary value of energy sold by RPPS or traders and provided to consumers via Overstrand's grid
Eskom grid	The transmission or distribution power system owned by Eskom.
Generator	A person who generates electricity.
Overstrand's grid	The distribution power system in Overstrand's licensed supply area.
Grid	An electrical power system used to transport electrical energy. Also referred to as network.
Off taker	A Overstrand electricity consumer and the purchaser of third-party electrical energy. Also referred to as end-user.
Reticulation	Trading or distribution of electricity and includes services associated therewith;
The Constitution	The Constitution of the Republic of South Africa, 1996.
RPPs	(Renewable Power Producer) A generator who generates power using renewable energy sources either in Eskom or Overstrand Grid.
Trader	A licensed entity engaged in electrical energy trading.
Trading	The buying or selling of electricity as a commercial activity;
Wheeling	The transportation of electrical energy through a network not owned, controlled, or leased by such party.

3 SCOPE OF POLICY

The policy covers the following:

- **Legal and regulatory framework**

In an uncertain and constantly changing energy regulatory environment, it is important to review and update the guideline to ensure compliance with national legislation.

- **Requirements to wheel energy on the Overstrand Grid (Annexure A)**

These requirements will be constantly reviewed, as technical capacity is built over time.

- **Wheeling scenarios.**

The different wheeling scenarios will be explained in this section.

- **Application process.**

The application process will be explained, as well as the information requirements from RPPs.

4 LEGAL AND REGULATORY FRAMEWORK

The Constitution states that a municipality has the “executive authority” with respect to electricity reticulation and “has the right to administer” electricity reticulation (S156). The Constitution further states that the public administration of service should be provided “impartially, fairly and equitably and without bias” (S229).

The municipality must, however, adhere to national legislation regarding the administration. The applicable act is the Energy regulation act (ERA). The act states that “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” S21(3).

Furthermore, in S21(4) the act states that access must be provided on the conditions set out in the licence of the distributor as it relates to, but is not limited to the following:

- Access being allowed or refused.
- Compliance with any rule, code or practice made by the regulator.

The licence conditions consist of financial, legal, and technical conditions. There are various technical conditions mentioned in the licence but the one specifically applicable to wheeling is NRS 048 (quality of supply).

Overstrand is thus obligated to allow RPPs access to the Grid but must still adhere to its licence conditions. According to the ERA, Overstrand may grant or refuse access on the conditions of the licence. It is therefore the stated intention of Overstrand to impose additional conditions on wheeling entities only insofar as it will ensure the quality of supply to its consumer base.

The additional requirements will be mostly technical in nature. Overstrand aims to develop the technical capacity with pilot projects and foresees the requirements being amended regularly. The municipality does not want to take unnecessary technical risks by enabling wheeling. The project will rely on standards already developed for small scale embedded generators (SSEG's). This will ensure minimal technical risk for Overstrand and compliance with all relevant technical standards.

In summary, Overstrand will allow non-discriminatory access to the municipal grid by RPPS in full compliance with national legislation and the rules or codes published by the regulator. In addition, it will create requirements for RPPS to ensure the municipal compliance to its licence conditions.

5 WHEELING SCENARIOS

The tariff applicable and the technical requirements depend on the location at which the **generator** and the **off taker** are connected. The options are:

1. Generator connected to another grid than the Overstrand grid.
2. Generator connected to the Overstrand grid.
3. Off taker connected to another grid than the Overstrand grid.
4. Off taker connected to the Overstrand grid.

“Another grid” as mentioned above could be either Eskom, another Municipality or possibly any other licensed distributor of electricity.

Both traders and generator will be allowed to wheel electricity. Both must adhere to NERSA’s rules and regulations in terms of licensing and registration as well as national legislation.

For the initial period a generator alone cannot wheel to more than one consumer. A trading licence issued by NERSA would be required to wheel to more than one consumer.

The following figures illustrates the wheeling scenarios.

5.1 Eskom connected generator wheeling to a Municipal off taker

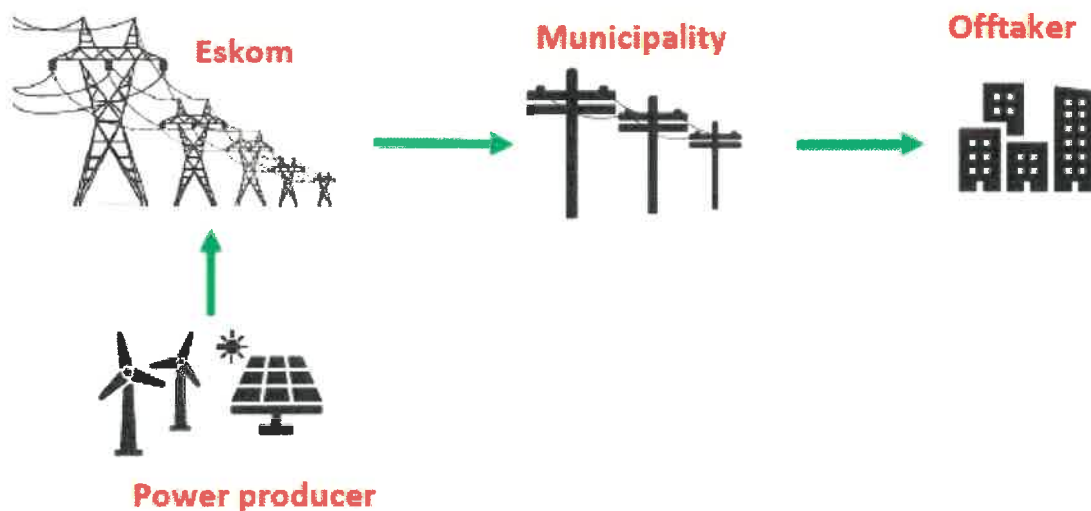


Figure 1: Eskom connected generator wheeling to a Municipal off taker

5.2 Municipal-connected generator wheeling to a Municipal off taker

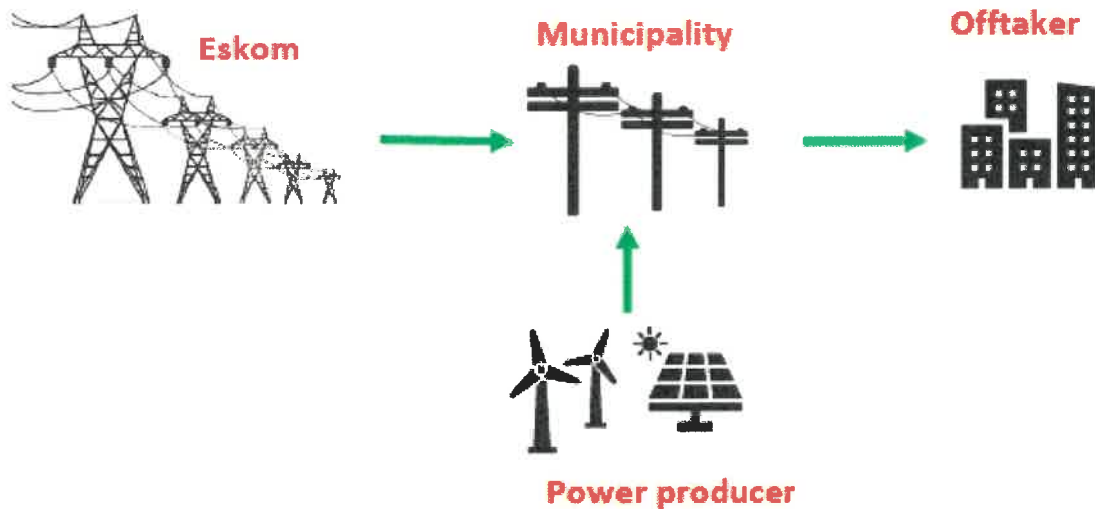


Figure 2: Municipal-connected generator wheeling to a Municipal off taker

5.3 Municipal-connected generator wheeling to Eskom-connected off taker or a municipal off taker in another municipality.

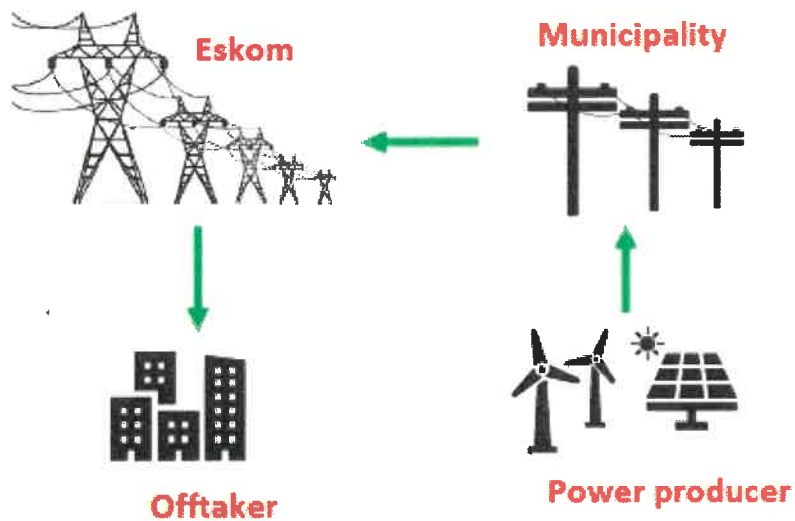


Figure 3: Municipal-connected generator wheeling to Eskom-connected off taker or a municipal off taker in another municipality.

6 APPLICATION PROCESS

The application process will be handled on a case-by-case basis. The applicant is to inform the Electrical Department as soon as possible, when considering entering a wheeling arrangement. All the requirements in **Annexure A** should be met.

The contracts mentioned below must be signed before wheeling can take place.

1. Generator registration at municipality. The proposed generator/ current generator will need to register as an SSEG or adhere to the relevant generator criteria with Overstrand and comply with the connection requirements. This requirement is in addition to registration or licensing requirements as imposed by NERSA (by the generator) in terms of the Electricity Regulation Act.
2. Amended supply contract with the off taker. The consumer will need to amend its supply agreement with the municipality.
3. Use of systems agreement between the trader/generator and the municipality.

ANNEXURE A**REQUIREMENTS OF THIRD-PARTY ENERGY PROVIDER**

The requirements are listed in two sections. The first section is only applicable if the generator is connected to the Overstrand Grid. The second section is applicable to all applicants.

Overstrand connected Generator:**1. Generator tariff**

The generator must be on the applicable time of use tariff for consumption.

2. Generator connection agreements

The generator must adhere to the generation connection requirements for the connection of the generation facility.

3. Generator connection Voltage.

Generators are preferred to be connected at 11kV or higher to the Overstrand Grid. Low Voltage (400V) connected generators can be approved by the Chief Engineer.

Applicable to all:**1. NERSA licenced / registered**

Only generators that comply with NERSA's generator licensing requirements will be allowed to wheel.

2. Limit on total capacity.

The allocation of Overstrand's wheeling capacity will be done on a basis to ensure that competitive market will prevail, and lowest possible prices can be achieved. This value will be determined by the Chief Engineer. The Municipality will review this allocation when required.

3. Limit on capacity per applicant

3 MVA maximum export capacity allocation will be allowed per applicant per site. The Chief Engineer can approve higher export capacity.

4. Minimum connection size of the off taker.

The off taker must be on a Time of Use (TOU) tariff.

5. Contractual agreements

The use of systems agreement will be developed on a case-by-case basis and must adhere to the current requirements set in the Policy.

6. Revenue neutrality

The tariffs must be at least surplus (lost revenue – cost savings) neutral for the municipality. Any additional charges for wheeling added by Eskom to the municipality's account will be for the off takers' account.

7. Off taker requirements.

The off taker must be approved by Overstrand and the off takers' supply agreements must be amended.

8. Billing reconciliation period.

The billing will be reconciled monthly for corresponding TOU periods until the billing system can reconcile for hourly or half-hourly periods. No banking will be allowed.

9. Any off taker may not receive any electrical energy from more than one RPP or one energy trader, other than the municipality, as applicable.**10. No energy banking**

Any electrical energy not consumed by the off taker will not be credited i.e., no banking of energy will be allowed. This means that Overstrand will receive this energy free of charge.

11. Load shedding or outages

No wheeling will be allowed or possible during a network outage or load shedding. All wheeling generators shall have dead grid safety lock equipment installed to disconnect the generator from the grid in case of an outage.

ANNEXURE B

ACCOUNTING

Accounting for wheeling will be done as follows:

Municipal Grid connected Generator

Eskom bill to the Municipality:

- Eskom's bill will automatically reduce because less energy will flow from Eskom to the municipality as the energy will be generated by the Generator connected after the Eskom meter.
- The amount of energy reduction in the Eskom bill will include the reduction in the losses as the flow of energy through the networks closest to the Eskom supply will reduce.
- There will however not be a clear adjustment in the Eskom bill, the consumption quantities will simply be lower.

Generator Bill:

- The generator will be billed for the standard Overstrand applicable TOU tariff charges including:
 - Standard Basic charge
 - Demand and Access charges in respect of:
 - the maximum capacity it wants to take from the Grid and based on the actual demand used
 - or in cases where the network capacity is exceeded based on the wheeling demand.
- The generator will pay for any energy used at the standard energy charges but will not be credited for any energy wheeled.

The Off taker:

- The bill at the standard tariff applicable to the off taker will be the same as before the wheeling and thus firstly reflect all the energy going through the off-taker meter.
- An additional Basic charge will be levied to cover the additional costs relating to the implementation of the wheeled energy approach of the off taker.
- An energy credit will be applied for the wheeled energy at the Eskom Megaflex energy charges (all kWh charges) as applied to Overstrand by Eskom to the network where the consumer is connected.
- The energy credit will reflect:
 - the total kWh wheeled
 - Minus the amount of kWh wheeled which exceed the amount consumed during every half hour period. (over wheeled energy)

- No credit is applied in respect of demand and access charges.

Municipal Grid connected Generator wheeling to Eskom consumer

- This will not be allowed. The main reason is because such generator will be using the capacity available on the Overstrand Grid to install generators to benefit Overstrand consumers.

Eskom connected Generator

Eskom bill to the Municipality:

- Eskom will charge an additional basic charge for wheeling to the generator.
- Eskom will credit the account by the amount of wheeled energy as provided by the generator at the TOU energy charges of the Eskom WEPS tariff but not in respect of:
 - The losses factor.
 - Ancillary service charge and electrification and rural subsidy charge.
 - No adjustments in Maximum Demand or Access charges.

Generator Bill:

- Eskom will charge the Generator.

The Off taker:

- The bill at the standard tariff applicable to the off-taker (in future on TOU) will be the same of before the wheeling and thus firstly reflect all the energy going through the off-taker meter.
- Two additional Basic charges will be levied to cover the additional costs relating to the wheeling:
 - The municipal wheeling Basic charge.
 - The Eskom wheeling basic charge.
- An energy credit for the wheeled energy will be the same as that by which Eskom credits the account to Overstrand. (WEPS TOU energy rate excluding losses) These amounts will be per TOU period and will not be reconciled per half hour period but per month.
- In cases where there is over wheeling in any TOU period, the benefit will be for Overstrand. No banking will also be allowed between the different TOU periods.