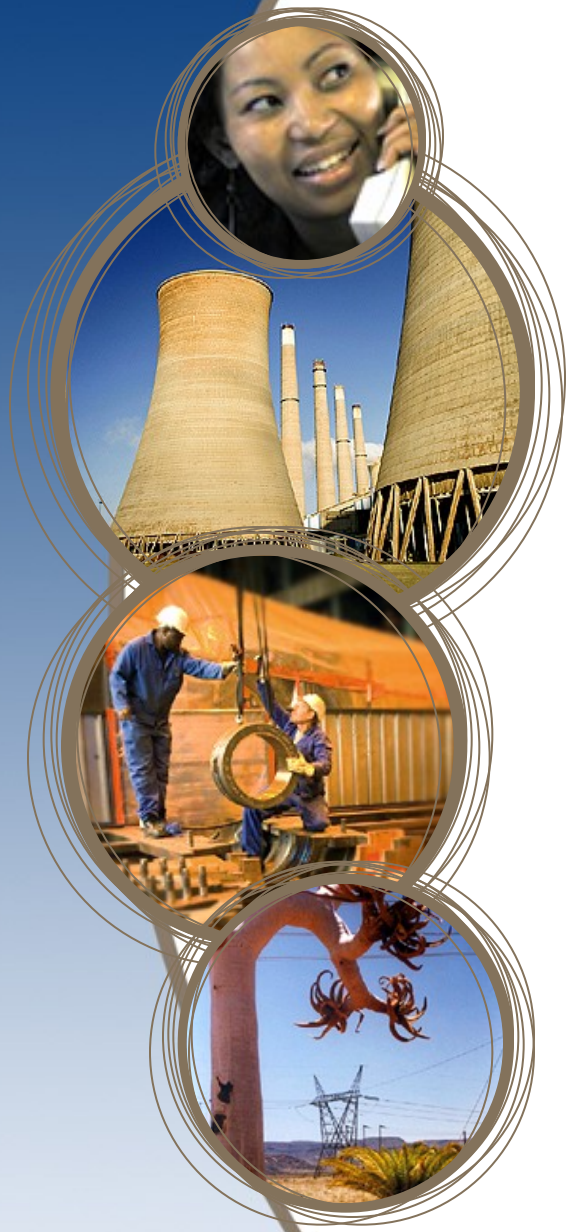
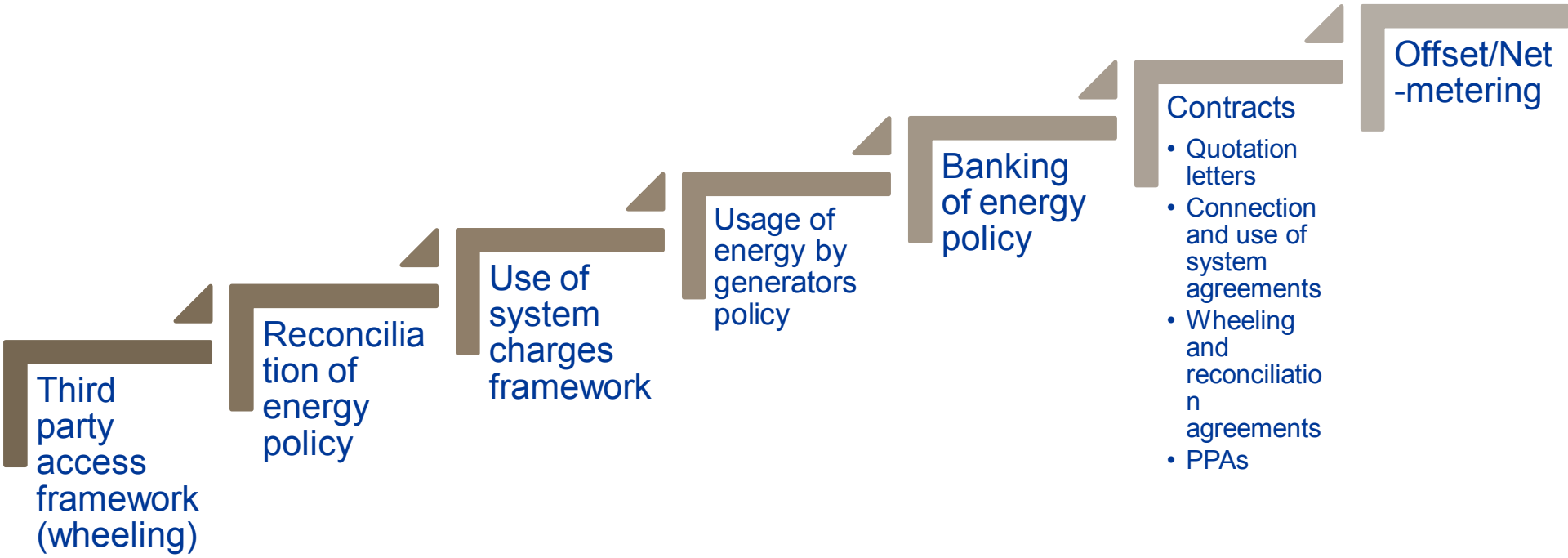


Pricing principles and approach for the transportation of energy

Process and policy development



Third party access (wheeling)

Eskom provides non-discriminatory access to all customers – generators and loads

- Whether they are Eskom owned, IPPs that sell energy to Eskom or IPPs that sell/wheel energy to third parties

Eskom supports wheeling of energy, subject to the required approvals and licences being obtained

Currently wheeling is a simple approach

- Is a financial transaction – adjustment on the bill based on standard tariff charges
- Ignores “actual” energy flows/distance between the parties
- Losses and network charges are charged to the load using standard tariff charges – no special “wheeling” charges

Some challenges with wheeling

Wheeling costs are perceived to be too high

- Cost of tariff cross-subsidies make up a significant portion of the wheeling cost
- The network charges are not cost-reflective – high-voltage network charges cross-subsidise low-voltage network charges (historical - averaging)
- The electrification and rural subsidy charges (socio-economic) becoming unsustainable

Requires all parties to agree and contract to the arrangement

Wheeling transactions can be complex and administratively cumbersome

- One party within municipal boundaries
- Both parties within different municipal boundaries
- Within customer (co-generator) boundary
- The 2 parties are electrically connected using a portion of the Eskom network – should full charges apply?
- Etc……..

Reconciliation due the transportation of energy

There are a number of different types of transactions where the bill will be adjusted

- Wheeling – credit for value of wheeled energy
- Offset (net metering) – credit for energy exported
- Co-generators that sell to Eskom – add back of energy consumed
- Generators within municipal boundaries that sell to Eskom – add back of energy consumed
- Banking – credit in later months

Scenarios are constantly being added to ……..

Use-of system charges framework

Eskom submitted to NERSA a proposed use-of-system charges framework

- Dealt with “wheeling” charges (payable by loads/buyers) and proposed a methodology for use-of-system charges for generators
- Methodology for generator charges included a rebate based on generation volume for Distribution connected generators.
- For Transmission connected charges based on zones

NERSA in turn then sent out a consultation paper

Industry provided inputs

Still waiting for NERSA’s decision

Currently only use-of-system charges payable are administration and service charges

Import and export of energy at the same point of supply– proposed pricing and policy

Eskom

Generators are both users of energy at times and producers of energy at other times.

- Co-generators typically would consume more energy than they produce and pure generators would typically produce more than they consume.

How should the generator be charged if the export and import of energy is at the same point of connection?

- There are standard tariffs for loads and a tariff framework for generators, currently under development by NERSA - which would apply for the network usage? Should both be charged?

Propose a new tariff for customers that both generate and consume energy. This tariff will have the same rates as Megaflex, plus will include the generator use of system charges

- Proposed approach currently going through the internal Eskom approval process
- Will be submitted to NERSA for a decision

Proposed charges payable where import and export of energy occurs at the same point of supply

Import		Export
+ Energy charges on energy supplied		
+ Network charges on UC and MD*	Greater of	+ Network charges on MEC#
+ Losses on energy supplied	Sum of	+ /- Losses on energy exported
+ Reliability services on energy supplied	Greater of	+ Reliability services on energy exported
+ NERSA approved subsidy on energy supplied		
+ Service and admin charges on size of supply		+ Service and admin charges on MEC

* UC – utilised capacity (higher of notified or actual demand)
MD = maximum chargeable demand in a month

MEC – maximum export capacity (higher of notified or actual

Banking of energy

Generators at times may generate more energy than is consumed - at their own plant or by their contracted wheeling buyer within a specific month

Generators may elect to sell this energy to Eskom – but requires a PPA and can only do short term without a bid process

- In absence of a market must allow banking of this excess energy to be utilised either by the generator or by their contracted wheeling buyer at a later date.

This is a need that has been identified by the industry

There are challenges

- Will require rules
- Can become complex and would need to automated (through the billing system)
- Has financial implications (year-end financial accruals for banked energy?)
- Will require additional administration work
- Rules may require NERSA approval

Proposed approach/rules for banking

Banking arrangements will be allowed on TOU tariffs and will be approved on a case-by-case basis and only for infrequent and inadvertent over-generation,

Banked energy will be capped to 50% of the average monthly consumption of the preceding 12 months, unless otherwise agreed by the System Operator

- No restrictions on the amount to be banked where the Eskom network is not able to provide supply but the generator still generates and exports.
- In cases where the banking of energy places the Eskom grid/system at risk, the System Operator has the right to request limit the amount of energy generated

Credit for banked energy

- Banked energy to be credited will not exceed energy consumed in the month.
- The banked energy will be permitted to be carried forward from month to month within a moving 12-month period only.
- Banked energy to be redeemed first, and at rates applicable at the time of banking and not at subsequent increased rates.

Charges

- A once-off standard charge and an additional admin Charge would be payable to recover the costs of administering the banking process
- Banking approved for a customer does not enable the customer to avoid load shedding.

Contractual arrangements

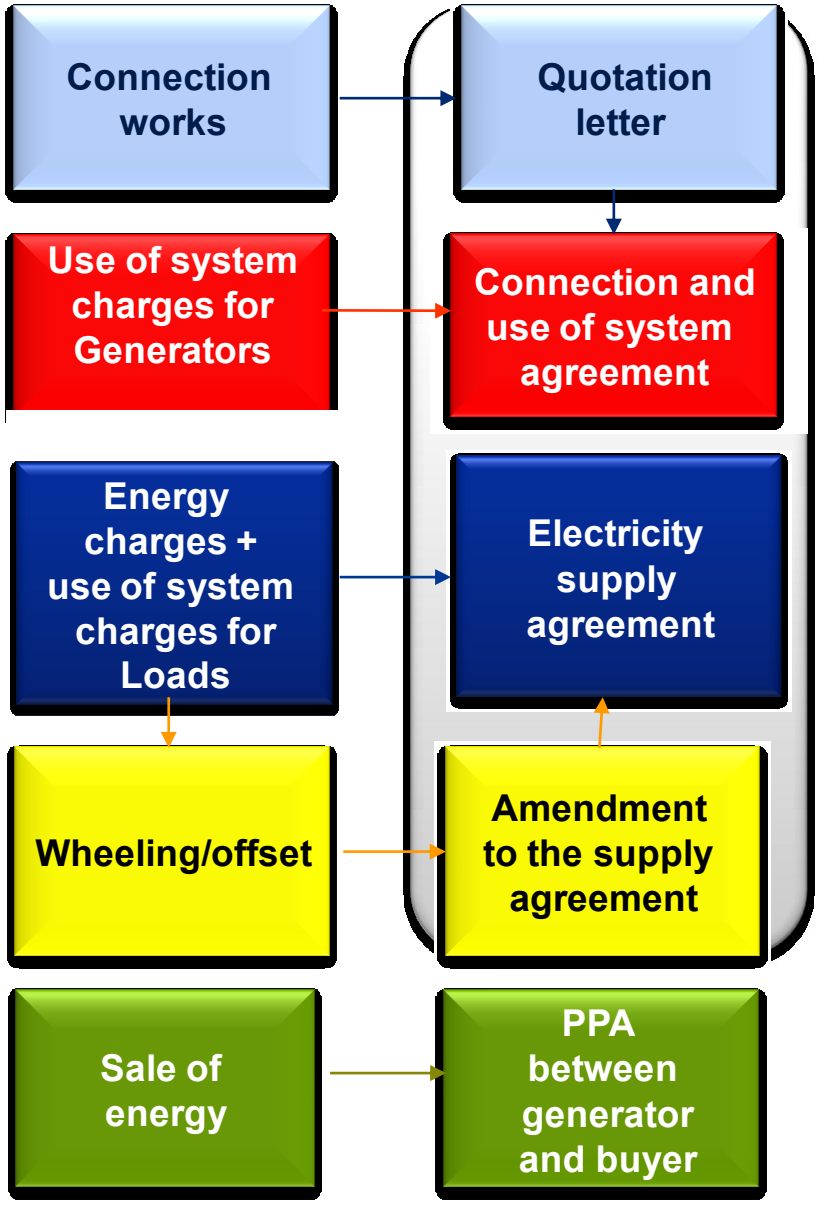
A quotation for the connection works will follow the application for connection and the provision of a cost estimate

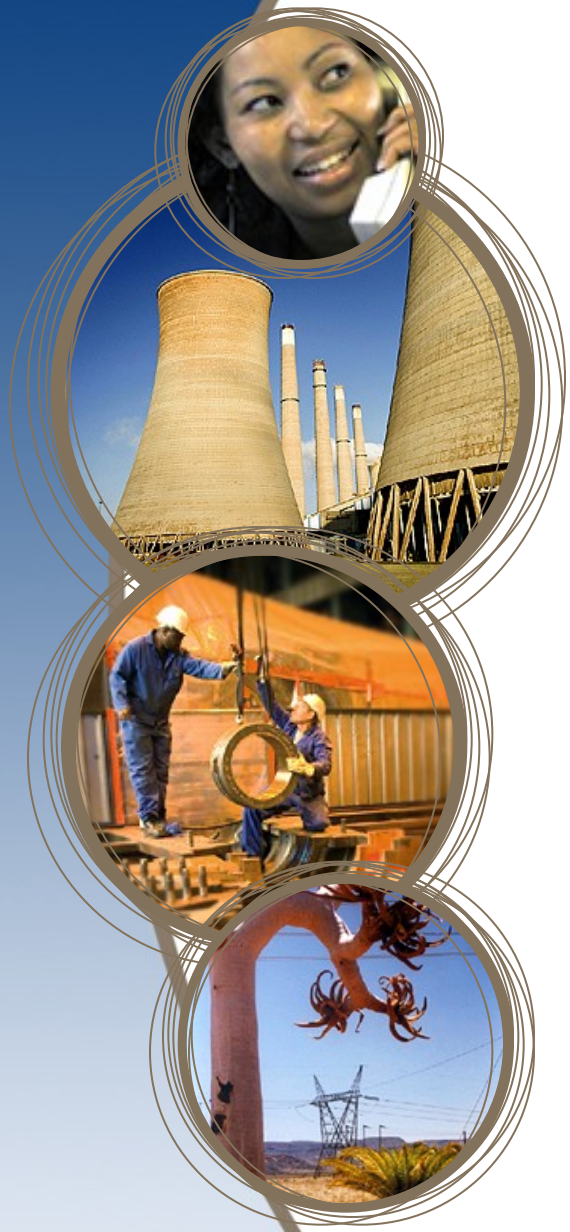
The generator will contract with the network provider (Licensee) to provide network services. The network provider will raise charges for these services.

The load will contract with the Licensee through the electricity supply agreement for the provision of network services and supply of electricity. The Licensee will raise charges for these services.

If the energy is sold to a third party or offset, the electricity bill must be adjusted in terms of an amendment to the supply agreement. energy.

The generator will contract with the entity purchasing the energy through a PPA and this may be with Eskom, a third party or for own generation.





Questions????

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