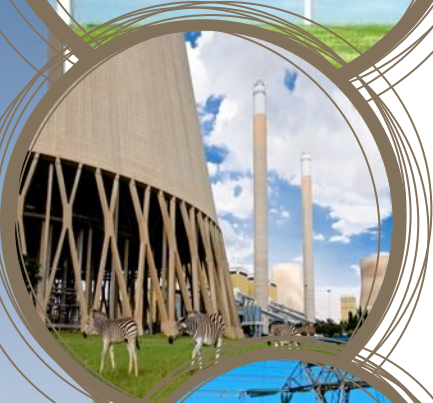


# AMEU Workshop

## RMIPP PP Update & DRME regulation to threshold for Licensing Conditions from 1 to 10 MW

May 2021



- The Bid submission closed 23 Dec 2020, and Eskom had issued in excess of 90 Cost Estimate Letters under extreme and tight timelines.
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- The next part of the process is the Budget Quote (BQ) development process for 8 Preferred Bidders (10 projects), leading up to Financial Close for each preferred bidder. Anticipated Financial Close will be end of July 2021. (Not Yet Confirmed)
- Connection Process after that is also very constrained, due to “emergency” nature of connecting 2GW of dispatchable capacity in a short space of time.

## Summary of Status on RE IPP PP:

- Bid 1, 2, 3, 3.5: no change
- Bid 4: project grid connections are proceeding, and reaching commercial operation dates
- Bid 5: has been released, Minister announcement during early March, bid submission by 4. August 2021 (?)
- Bid 6 and 7: RFPs in September 2021 (?) and February 2022 (?) respectively)

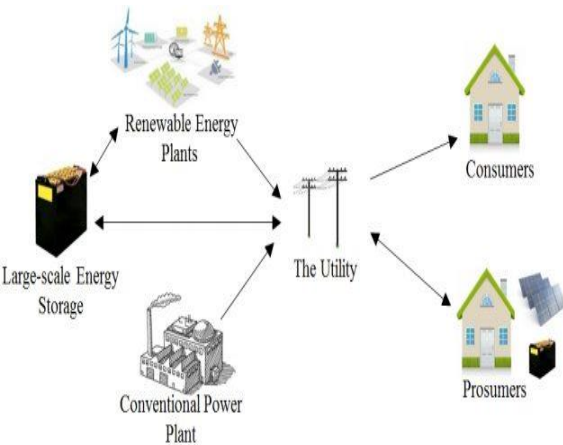
All of the above require Nersa Licenses, in line with the procurement programmes and the IRP. This process is well planned, and predictable. The Eskom Connection Agreement is signed early in the process, enabling Nersa to issue Licenses as part of, and within the Procurement Programme timeline.

# 1 -10MW IPPS: Technical/Operational Risks associated with the costs and their mitigations

- **Gap of customer attractive SSEG framework:** risk of more and more cases of unauthorised SSEGs on the grid; already significantly penetrated the networks between Eskom and municipalities alike.
  - **Rethink influences:** how Distribution tactfully approaches SSEGs as a utility and a distributor of electricity.
- **Quality and Safety Standards:** Electricity distributors are obliged to ensure that distribution grid power quality and safety standards are upheld to protect field staff, to protect the public and to protect Eskom infrastructure while also managing the potential revenue impact
- **Capacity Risk on load-modifying or supply services** that DERs provide via dispatch of output (MW) or reduction in load that is capable or reliably and consistently reducing net loading on desired distribution infrastructure.
- **Power supply reliability risk** on load-modifying or supply service capable of improving local distribution reliability and/or resiliency. Service provides fast reconnection and availability of excess reserves to reduce demand when restoring customers to service during abnormal configurations.
- **Power Resilient risk** on load-modifying or supply service, including Microgrids. Service also provides power to islanded end-use customers when central power is not supplied and thus reduce the duration of outages



## Needs



## Products or Services



## Objectives:

1. Dx Local
2. Dx Regional
3. National

- Facilitating reductions in the carbon footprint of the whole system by providing Green Energy
- Maintaining security of supply and improving electricity system resilience
- Optimised distribution network capacity investments
- Deferring and / or avoiding the need for additional network reinforcement / investment
- Network Congestion Management
- Better voltage control of the power system
- Increased distributed generation hosting capacity
- Improving power system efficiency – technical losses reduction
- Providing innovative opportunities for future energy products and services
- Reduced curtailment of distributed generation and reduced outage times
- Reduce the use of more expensive levers to manage reserve e.g. OCGT

- No Master Plan exists currently, and there is no feel of expected demand for such generation plants in the near future.
- Hosting Capacity studies will have to be undertaken for each application. This will place an immense strain on Planning resources that are already stretched due to IPP and SSEG applications.
- Quality of Supply: impact of harmonics and quality of supply assessments per applications
- HV vs MV rules i.e. when to insist on HV evacuation for  $> 10$  MW
- Self-build options: how will this be exercised and controlled?
- Area of Supply impacts: when traversing property not owned by the developer, needs to be strictly enforced.
- Any generator greater than 1 MW will meet the Category B Signal Listing requirements & meet full Grid Code requirements Be subject to a full RETEC test and requirement
- Network availability factors and Generator Curtailment options need to be built into the contract
- Managing the California duck curve and impact on ramping rates and protection coordination
- Metering requirements: SMART Metering and Big Data

# Lifting the registration requirements from 10 to 50MW - Implications

## Grid Access Unit:

- Eskom will not connect any generation project without either official Nersa license, or registration (or official Nersa exemption from either), and also a signed Connection Agreement (CA)
- At the same time, Nersa does not issue License without CA (chicken-and-egg situation sometimes causes delays), but may do so for Registration without CA
- There is no Grid Code Compliance testing required for Registration (Licensed connections need to be tested)
- Large volumes of applications
- Regulatory issues such as wheeling



- Need to clear Dx industry structure and operating model
- Policy and Regulatory decision making is key to evolve the flexible service market to serve national, regional and local objectives
- Distributors needs direction on Distribution Wires business to be System Operator and Trader/Aggregator
- Pre-Qualification of distributed flexible services
- Unbundling of tariffs and enabling wheeling (losses of sales)
- Alignment to nodal pricing methodology
- Generation unit curtailment rules and agreement would need to established
- Who pays for deep strengthening and standby charges?
- Can Distributors purchase flexible services from distributed energy resources?
- Does a Distributor have the ability to OWN generation units and trade – player and referee (Ownership vs Control/Operator)

# Thank You! Any Questions?

