



Preliminary Comments to AMEU Workshop on proposed ERA Schedule 2 Amendments 12 May 2021

CITY POWER JOHANNESBURG (SOC) LTD



Potential risk to Dx business if Licensing Exemption is raised from 1MW to 10 MW

- The customer own roof, self consumption scenario will result in lower sales volumes in the event existing system capacities are increased.
- Ironically, the proposed threshold raise most favors the own roof own consumption embedded generation scenario.
- Larger customers are increasing capacity beyond 1MW anyway, and several are in the process of applying for generation licenses for higher than 1 MW capacities. The IRR is sufficiently attractive for larger systems.
- The exemption will likely accelerate the uptake of larger private PV systems on sites with expansive roof space or open parking areas.
- No technical risk is expected where embedded generation is connected to cable MV distribution networks. There is potential for QoS issues where greater capacity may be connected to MV overhead lines, however, mandatory network studies will avoid this problem. Requiring that inverters are capable and set up to perform Voltage Control will also avoid this.
- We have also found the larger systems to be properly engineered and compliant to grid codes, an advantage of dealing with bigger systems



Potential benefits to Dx business if Licensing Exemption is raised from 1MW to 10 MW

- Increasing the threshold to 10MW and simultaneously opening the Dx grids to trading and wheeling will unlock significant private investment in embedded generation
- Where a Dx operator has wheeling tariffs in place to support trading of energy across the Dx grid, the increased uptake in embedded generation will create a new, secure revenue stream for them.
- This will contribute significantly to solving the current energy crisis, and will have the effect of reducing the need for load shedding during business hours where PV systems are deployed. This also takes pressure off Eskom while they catch up on maintenance or build additional Tx connected capacity
- Cleverly designed, time discriminated wheeling tariffs can also promote private co-investment in energy storage systems, to the benefit of the system as a whole
- Those customers without suitable roof space can access clean energy through such a mechanism, and will still contribute to the operating costs and cross-subsidy obligations of the municipality. This is important to companies that will make investments in response to the new Carbon Tax offset mechanisms permitted
- A Dx operator's biggest asset is the load that it serves. Typical MV cable Dx grids are able to absorb a lot of power without costly Tx grid extensions to transport the power
- Dx connected generation reduces the technical losses associated with the electricity business
- We believe our customer satisfaction will increase where we can offer such new grid services, and we have a better chance of keeping them 'on-grid'



What are the constraints to realizing the potential benefits

- We cannot understand the rationale behind the requirement that trading partners must be related in terms of Section 2 of the Companies Act, 2008.
 - This seems to be an unnecessary requirement aimed at reducing the potential for trading of energy, which will also reduce private investments in new capacity and our opportunity / potential to generate revenue from wheeling charges.
 - The requirement favors the large companies and discriminates against smaller companies.
 - The burden of administering and policing this requirement also now rests with municipalities who will require suitably skilled legal resources to effect control.
 - The requirement is likely to result in unintended consequences such as the creation of dummy corporations to link ‘trading partners’ so that they comply.
 - Where wheeled energy is traded between related companies, no VAT is generated and taxes are offset between the ‘related companies’.
 - By contrast, if the amendments enabled trading between unrelated IPPs and private off-takers, National Treasury would earn significant VAT revenues from auditable, properly metered wheeled energy transactions between the parties, from any new generation capacity added to the system.



Type of internal / external support needed to realize potential benefits

- To support wheeling and trading:
- Metering systems will require upgrading to support full four quadrant metering, and to provide half-hourly integrated metering data.
- Billing systems will require re-programming
 - To enable simple bi-lateral trades initially
 - And to enable full trading and settling functionality at a later stage
- Specialized grid access departments will be required to manage the increased uptake of embedded generation.
- Legal assistance and capacity will be required to manage use of system agreements
- NRS 097 needs to be revised – its approach to date has been conservative, to limit connected capacity to a statistical ‘safe’ minimum. It will now need to be geared to ‘sweating’ the grid while maintaining QoS criteria.



Additional concerns -

- We are wary of clause 3.5 that permits the operation of a distribution facility up to the point that connects a generation facility to the point of grid connection, without the need for a licence.
 - We are constantly asked if private distribution cables can be run between adjacent erven, where a generating plant is installed on one erf, but the load is on a neighboring erf.
 - We are NERSA licensed distributors and reserve the right to provide such interconnection services between separate erven, be they adjacent or remote to one another.
 - Additionally, private distribution systems within a licensed distribution area must be confined to individual erven for safety reasons, and must at least be registered with the municipal distributor where erven may be 'Notarial Tied' to facilitate private distribution systems within.



Thank you -

Any questions?