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Incorporating Embedded Generation onto Municipal Networks

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Abstract

Embedded Generation is the process of generating electricity on site and then connecting the supply to the electric network. In recent years South Africa has seen a rise in privately owned embedded generation due to the current challenges with the national grid. Business owners are looking to be more resilient to ensure security of supply and maintain continuous operations. The rise in embedded generation in the private sector has a technical impact on the electrical network as well as a financial impact on municipalities via loss of revenue.

This paper looks at the possible ways for municipalities to reduce the financial impact caused by privately owned microgrids and generate sustainable revenue in the process.

It is proposed that the municipality will operate and own the embedded generation that will be located at the off-taker or buyer's premises.

The project can be financed by the private sector using an open tender process similar to REIPPP. The municipality can then enter into a power purchase or lease agreement with the private business owner. The municipality will control the generation and integrate into the electric network using an automated control solution that can assist with load shedding, load sharing, usage and tariff management.