Connection of small-scale renewable generation to Eskom’s network

Large Power Users

Background (Customer Small-Scale Renewable Generation)

In the global context, the rising of energy costs, the growing public concern about the environmental impact of inefficient energy use, the energy constraints of the utilities, and also the planet’s diminishing fossil fuel energy resource reserves have increased the relevance and importance of energy efficiency and now also the need for alternative renewable energy (that is, typically solar photovoltaic, wind, small hydro, and biomass) options at the customer’s point of use.

This has been no different in South Africa where we have observed an increase in the interest from customers and suppliers alike with regard to Eskom’s position on small-scale renewable energy generation, typically rooftop photovoltaic (PV), and their connection (grid-tied) to the Eskom grid for compensation and/or storage of the surplus energy exported.

Many of these customers want to invest, if they have not already invested, in such PV systems, with the expectation of being compensated (net metering) for their excess generated energy not consumed. It is important, however, to understand that while Eskom supports such renewable energy resources, there are challenges that need to be addressed so that the connection to the grid of any small-scale generation is done in a safe and manageable way.

Connections to the Medium-Voltage (Above 1 000 V) Grid

There is already an existing approved process to allow generator connections to Eskom’s medium- and higher-voltage networks. Only customers connected on Eskom’s medium-voltage and above networks and also those on Eskom’s large power tariffs are currently permitted to connect to the grid and get credits for energy exported, as there are processes, policies, metering, and tariffs in place that enable such connections. All such connections will have to comply with Eskom’s technical standards for interconnection, the requirements of the SA Grid Code, the Distribution Code, and the Renewable Code. The Eskom process for medium-voltage and higher connections is available at http://www.eskom.co.za/Whatweredoing/Pages/Info_Site_For_IPPs.aspx.
Connections to Low-Voltage (Under 1 000 V) Grid

The Eskom framework for connecting small-scale generators (typically rooftop PV) to the low-voltage network is in the process of being developed. The framework will consider the safety, legal, technical, metering, and tariff requirements. Eskom will also seek to get approval from the Regulator to implement a net-metering scheme where the customers will receive credits for their own excess energy that is at the time exported onto the grid.

Until such time as the framework is in place, no small-scale generator connections will be allowed to be grid-tied to Eskom’s low-voltage networks, as this places the safety of the public and Eskom operating staff at risk. Eskom will also not allow meters to turn backwards and reserves the right to disconnect any supply where the safety of staff or the public is compromised.

Should you want your generation system to be grid-tied, please contact the Eskom contact centre on 08600 ESKOM to arrange for the nearest Eskom (Grid Access Unit) advisor to assist you with the process to be initiated for Eskom to evaluate the installation and discuss the options available for your installation.