

Wind turbines with a connection to the inter-connected grid

Wednesday, 17 September 2008

Last Updated Thursday, 22 October 2009

Big size wind turbines (over 1MW) have a generation cost (around 1.23 Nkf/kWh) particularly interesting in comparison to the conventional energy generation cost currently applicable to EEC (Eritrean Electric Corporation) grid (around 1.75 Nkf/kWh). However, the main constraints to be considered are:

High investment costs: 1,300,000 USD for one MW installed;

Integration problems: mainly economic topics (high connection costs);

Impacts on network operation, voltage profile and electricity network reliability;

Heavy logistics for system installation.

This type of application should be considered with relatively strong precaution as there is real need for specific transmission infrastructures.

In conclusion, small or medium size wind energy responds more efficiently to the Eritrean electricity demand and grid.