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Utility operated pilot wind energy project in Namibia

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Abstract

A utility-scale wind energy converter was connected to the electricity distribution grid of the ErongoRED to exploit the wind resources at the coastal town of Walvis Bay, Namibia. This DANIDA funded project constituted the first renewable energy initiative based on wind generation by a Local Authority in Namibia and southern Africa.

Apart from supplementing the power supply to Walvis Bay and, in particular, consumers at Mile 7, the project provided a learning environment to develop local expertise in the assessment, design, implementation and operation of grid-connected wind energy converters. In addition, this pilot project will provide a basis for assessing the feasibility of a large-scale (10 MW) wind farm.

The project is replicable in other countries but should take guidance from the lessons learnt. These include prior in-depth assessment of refurbished wind turbines (if applicable), capacity to operate pilot plants which have no economies of scale, risk mitigation for the local contracting parties, obligatory information sharing between international and local partner companies and allowing for as realistic implementation time frame.