

## **Odisha electricity regulator approves small biomass-based gasifier plant to feed into low transmission grid at the village level**

In a pioneering decision, the Odisha Electricity Regulatory Commission (OERC) has permitted a 25kW biomass-based generator to supply electricity to two villages in Bisamcuttack block of Rayagada district through the existing low transmission network of the Southern Distribution Company. For the first time, the power plant will be connected to an existing 220V distribution network by feeding in at the transformer level.

This innovative arrangement will eliminate the need to construct a parallel distribution network for supplying electricity to consumers in off-grid mode. Further, it ensures better quality and reliability of electricity supply for households in the villages during the evening hours when the electricity is needed most. In its order, the Odisha regulator observed, "The 25 kW biomass gasifier power plant is the first-of-its-kind in the state of Odisha." It further added, "The plant is unique in nature since it will inject its full capacity at a particular time of the day for residential use."

Another notable feature of this arrangement is the fact that the power plant is managed by Maa Dharini Mahila Maha Sangh (MDMMS), a local women self-help group. The regulator also approved the tariff for sale of electricity to SOUTHCO, thereby assuring a regular cash flow to MDMMS. This is the first time that a distribution company has been given permission to purchase electricity from a generator connected at low transmission level. The regulator approved the tripartite agreement executed between Grid Corporation of Odisha Ltd., SOUTHCO Utility and MDMMS for procurement of power from the 25 kW gasifier plant.

Expressing happiness about this policy development, Dr. Shirish Sinha, Deputy Director of Cooperation, Swiss Agency for Development and Cooperation (SDC), said that "This decision will pave the way for development of decentralised distributed renewable energy generation using local resources where the grid has already reached. This will strengthen the tail end of the electricity grid. Further, it provides an opportunity to rejuvenate a large number of small scale renewable energy projects in the country that are lying idle due to lack of respective regulatory provisions. The order of the Odisha regulator now provides a clear framework for connecting such projects to the grid."

The two-stage gasifier power plant is financed by the Swiss Agency for Development and Cooperation (SDC) under its project on accelerated diffusion of biomass based clean energy systems in India and by an EDF Energy Pulse Award. The Energy and Resources Institute (TERI) is the implementing partner. The technologically advanced two-stage biomass gasifier system for power generation has been developed by TERI in partnership with the Danish Technological University (DTU) and Effin'art, a Swiss energy efficiency consulting firm. Idam Infrastructure Advisory provided support for the regulatory process.

Under SDC's project, support is also provided for installing three other such biomass gasifier systems in Odisha and Madhya Pradesh: one project in the Koraput district for reliable electricity supply to a micro-enterprise managed by a women self-help group and for improving electricity access to rural households; one project in Mayurbhanj, which will bring electricity to a previously un-electrified village; and one project in Satna, which powers the bamboo processing facilities at a bamboo training center and uses waste bamboo for the power generation.

The OERC order can be accessed from: <http://www.orierc.org/ORDERS/2015/C-45-2015.PDF>

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