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Power Generation from Biomass

Project Title

Removal of Barriers to Biomass Power Generation in India Phase – I

Budget

Global Environment Facility: USD5.7 million; Ministry of New and Renewable Energy: USD5.3 million; and private sector: USD3.5 million

Duration

April 2007 – March 2010

Partners

Ministry of New and Renewable Energy, Government of India; and Indian Renewable Energy Development Agency

Project Location

Haryana, Maharashtra, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu and Uttar Pradesh

Challenges

The demand for electrical energy in India is growing at a rate of seven to eight percent annually. Electricity production is largely fossil fuels-based and has environmental implications leading to deforestation, pollution and increased emissions of greenhouse gases (GHG).

There is an increased focus on using cleaner energy sources, such as renewable energy to meet the growing energy demand and complement the fossil fuel sources. It is estimated that the potential to generate electricity from biomass is to the extent of 19,500 megawatt (MW) while less than 1,000 MW has been harnessed, till date. Several constraints such as weak institutional and financing mechanisms, policy framework and technical capacity restrict reaching the potential.

Response

The project supported by the Global Environment Facility and the United Nations Development Programme (UNDP) and implemented by the Ministry of New and Renewable Energy, Government of India, aims to accelerate the adoption of environmentally sustainable biomass power (combustion and gasification) and cogeneration technologies in India for generating electricity through different types of captive and distributed biomass resources. It also improves electricity supply using renewable energy sources without increasing the emission of GHG. This will be achieved by the removal of identified financial, technical and management barriers, thereby laying the foundation for the large-scale commercialisation of biomass power.

Impact

The project envisages achievement of the following:

- Enhancing biomass power generation in India;
- Developing model investment projects cumulating to about 26 MW;
- Identification and implementation of pilot projects for adoption of biomass power technologies; and
- Adoption of innovative financing mechanisms.

Enhancing capacities of financial institutions, regulators, policymakers and other stakeholders through information dissemination and capacity-building initiatives. Enhancing capabilities of stakeholders will result in replication of another 600 MW installation and further large-scale generation of power from biomass.