

## **RDG-06-18: Market Development for Renewable Energy**

### ***Project***

Transmission and distribution losses estimates for India are as high as 30-50%, and the many communities that currently receive poor quality and unreliable power provide a key opportunity for intervention. Increasing the share of distributed generation in the total electricity mix will have a significant impact on both clean energy supply, as well as emissions reductions. In addition, locating power generation closer to the consumer reduces technical losses and may result in commercial loss reduction as well. Utility restructuring taking place throughout the world is changing the way electricity is generated and distributed. Consumers are bypassing centralized power generators/suppliers to generate their own power through distributed generation for higher power reliability and better power quality. These distributed power generation systems have significant potential for reducing T&D losses and GHG emissions, especially when cleaner, alternative fuels and technologies are used. This project plans to introduce new concepts and technologies in India to support the distribution reforms being implemented by the GOI. These new concepts and technologies will focus on promoting widespread installation and use of smaller, more efficient distributed power generation systems, closer to the users. The tapping of India's renewable energy resources (small hydropower, wind, biomass cogeneration/gasification, solar) has been meager to-date, but conditions are ripe for market expansion, which could be stimulated through the financing and establishing green power projects. Policy and regulatory frameworks to advance green power development in Indian states is of considerable interest to the Government of India (GOI) and could help to develop the market. In addition, other potential technologies include fuel cells, microturbines, and municipal waste product utilization.

### ***Participation***

- The private sector (TBD) will be a major player in the supply of equipment and services, and will work very closely with the various stakeholders.
- Financial institutions will play in funding pilot projects and subsequent commercial projects.
- Other potential partners may include current USAID/India partners (e.g., Winrock International India, the International Institute for Energy Conservation) and the Bureau of Energy Efficiency.
- Collaboration with the U.S. Foreign Commercial Service.
- USAID/India would provide contract activity management.

### ***Goals and Objectives***

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Enhance the market for renewable energy and distributed generation technologies in India.

GHG emissions reductions following establishment of market conducive to deployment of clean, RE & DG technologies.

#### ***Objectives***

Facilitate market development for effective penetration of clean energy/environment industry in evolving Indian market.

Identify niche areas advantageous to clean energy deployment in Indian market.

Undertake preparation of required financial documentation for bankable projects.

Identify appropriate clean energy technologies that can be effectively implemented in Indian context.

Support projects for deployment of renewable energy and distributed generation technologies.

***Deliverables, Outcomes and Milestones***

- Support for market transformation; including analytical and technical support, financial analysis, and information for decision making;
- Support pilot projects for demonstration of new clean energy/renewable energy technologies;
- Sustained intervention of clean energy and environment industry in India; and
- Estimated emissions reductions and other benefits, such as cost and service quality.

***Location***

Three states in India to be determined.

***Resources***

\$2 million over a three-year period to support consultants, host training events, support study tours, and seed fund capital costs of demonstration projects.

\$5 million during the three-year period is expected to be leveraged (based on current leveraging success of USAID/India activities in the energy and environment sector).