

Summary
Wind Power Programme of Activities in India

WIND POWER PROGRAMME OF ACTIVITIES IN INDIA

General operating and implementing framework of PoA

Energy is of strategic importance for India particularly because of its fast growing economy, rising population, and its commitments for inclusive socio-economic development. In order to meet India's human development goals and objectives for poverty eradication, an economic growth rate of 9 percent has to be sustained over the next 20 years.¹ Therefore, India is faced with the challenge of meeting energy requirements for sustaining high economic growth, while adopting a sustainable low-carbon development path.

India's total energy usage has grown by more than 25 percent over the last two decades and the contribution to this growth was predominantly from fossil fuel usage.² Over the last 10 years, energy and peak demand shortage averaged around 8 percent and 12 percent³, respectively. Approximately 100,000 villages in India (17 percent) remain un-electrified, and close to 400 million Indians do not have access to electricity⁴. These figures illustrate the urgent need to increase the supply of energy to meet the power demand shortage, and to achieve inclusive growth.

India's total power generation capacity is around 182 GW as of August 2011, as against the global installed power generation capacity of 5,000 GW. India's power generation is heavily dominated by fossil fuel fired thermal power plants, with 79% of the electricity generated in the grid coming from thermal power plants. Large hydro supplies 14% of the electricity generated in the grid, whereas renewable sources (including wind, biomass, small hydro, solar) supply 4% and nuclear power plants supply 3%.

Thus there is a need to generate electricity from wind energy in India that can mitigate the effect of GHG emissions on a fossil fuel dependant grid for supporting clean development in India.

Policy/measure or stated goal of the PoA

INOX Renewables Limited (IRL) is the PoA Coordinating & Managing Entity (CME) for the PoA. In view of India's sustainable development priorities to generate power through non-conventional energy sources, IRL aims to develop organised framework for developing its Wind energy projects in India. The CDM-PoA framework would help to reduce the CDM transaction cost and streamline project implementation in India.

IRL envisages installing 3000 MW of wind energy power plants across India by 2020 under the PoA. The PoA will consist of INOX make turbines. For implementing such projects on a national scale, the CME would take CDM-PoA route. The proposed PoA will include CDM Programme Activities (CPAs) consisting of wind power facilities which will replace electricity from fossil fuel based power plants, thereby contributing to reducing green house gas emissions. This framework would help in streamlining the investment and project development of IRL in wind energy sector in India.

¹ "Low Carbon Strategies for Inclusive Growth," Planning Commission of India, Govt. of India, 2011

² "Low Carbon Strategies for Inclusive Growth," Planning Commission of India, Govt. of India, 2011

³ Central Electricity Authority

⁴ "Unleashing the potential of Renewable Energy in India", World Bank

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The power generated from the CPAs shall be sold to the national grid/ third party consumers/ traded on energy exchanges or wheeled to meet captive demand. Thus, it would contribute to reducing the energy deficit in India.

Contribution to Sustainable Development

Social well being:

- The PoA will create employment opportunities for the local community during construction and operation of the wind power CPAs. The technical skills and knowledge of the local workforce will improve thus leading to capacity and knowledge building.
- In addition to the above contribution, the PoA will lead to local infrastructure development in each region where CPAs are being implemented.
- PoA will lead to economic development of the region as engagement of a large pool of skilled, unskilled and technical supervisory work force for the project development at site brings along with it related economic activity in the form of housing, transport facilities, restaurants, hotels and banks etc.

Environmental well being:

- The PoA will utilize available wind to generate power; hence will reduce the emissions of green house gases (GHG) to the atmosphere by avoiding the use of fossil fuel for power generation.
- The PoA helps in conservation of limited fossil fuels such as coal, oil, natural gas which at present are predominantly used for power generation.
- The PoA will also help to reduce air pollutants e.g. SO_x, NO_x by reducing combustion of fossil fuels for power generation.

Economic well being:

- The generated electricity will be supplementing/ substituting the national grid, thereby improving the grid frequency and availability of electricity to the consumers. The increased power availability will provide new opportunities for industries and economic activities to be setup thereby resulting in greater employment, ultimately leading to overall development of the host country, India.
- The PoA also leads to diversification of the national energy supply, which is dominated by conventional fossil fuel based generating units.

Technological well being:

- The PoA will employ higher capacity wind turbines which will lead to better utilization of wind resources, as utilization in higher capacity wind turbines is more than lower capacity machine.
- Also the success of proposed PoA will promote the installation of higher capacity machine to improve utilization of wind resources in the Host country, India.

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The above document is a Non-technical description of the proposed PoA being implemented by IRL. IRL would hereby like to invite any comments/ clarifications on the same to be shared at the following email address cdm-poa@inoxrenewables.com