WIND VISION INDIA 2030
Evolving consensus through stakeholder engagement

"Wind Discussion Forum"

Evolving Consensus through Stakeholder Engagement

Background Note

SHAKTI SUSTAINABLE ENERGY FOUNDATION

Idam

For more information, please contact :
Wind Discussion Forum Secretariat
C/O IDAM Infrastructure Advisory Services Pvt. Ltd.
801, Crystal Plaza, 158, CST Road, Kalina, Santacruz(EAST), Mumbai - 400 098 India.
Telephone : + 91 22 4057 0201 Website : www.idaminfra.com

Context

In January 2014, renewable energy (RE) sources form 12% of India's total installed capacity of 235 GW. Out of this, share of wind capacity is the highest at 9% (20.2 GW). Although wind power development in the country began in 1990s, its capacity has started to grow only since 2006. The wind industry has successively added between 1500-3000 MW per annum through 2006 to 2013. This is primarily because wind technology has been technically and commercially viable in India for over a decade now. Limited availability of domestic fuel and ever-increasing prices of power from conventional sources has furthered the importance of wind for India.

Drivers

India has good quality wind resource particularly in the southern and western states where many areas have wind power density between 250 to 400 W/sq. m. Wind being a clean and indigenous source of electricity for the country, Government of India has been providing fiscal incentives such as accelerated depreciation (AD), income tax holidays, and excise duty exemptions to promote wind installations. In addition, technological advancements coupled with appropriate feed-in-tariffs and generation based incentives (GBI) have been contributing to the sector's growth so far.

Availability of domestic manufacturing and technical expertise makes wind much more acceptable from policy perspective than any other means of renewable energy. India has manufacturing capabilities to the tune of 10,000MW per annum and has presence of most world-class wind turbine manufacturers. These manufacturers working closely with developers and investors have taken wind to the current state where India is in lead with key developing countries on wind deployment.

Having said above, last two years for Indian wind industry have not been very good with annual deployment reducing from 3000MW to about 1500MW. Some of the major incentives stand withdrawn by the government with effect from April 2012 (and part of them later reinstated). In addition to bringing out long term policy and deployment vision for wind sector, few other considerations stand in between large scale deployment of wind and current state of affairs.

As we aspire to increase wind energy in our energy mix, a partial list of key focus areas include:

- **Grid infrastructure, integration and evacuation:** Our current transmission infrastructure and grid integration rules do not support injection of variable renewable energy and needs a review to provide equal opportunity for VRE
- **Land procurement, allocation and clearance:** So far, private sector has been managing land mostly under private-private deals with few exceptions. Even for such private deals, long and tedious procedures for land clearance needs to be taken care of. Government support in procurement and allocation of land for wind projects, with single window clearance system might help.
- **Incentives and support mechanisms:** Fiscal and financial incentives have become an area of concern for the Governments and regulators, as much as it availability has become a concern to the investors. In the absence of a clear trajectory, it is leading to confusions and hampering desired levels of deployment at reasonable tariff levels for the end-consumers
- **Power markets:** absence of enabling environment such as ancillary services markets, balancing reserves and storage techniques prevent a stable power supply to the grid and absorbing variable renewable energy seems like a disincentive for the grid operator
- **Access to finance at reasonable interest rates:** Financing cost is the only significant operating costs over the life-cycle of a wind project. The rates of interest continue to remain high, in the range of 12-14% resulting in high tariffs
- **Institutional frameworks:** Limited co-ordination between central and state governments and also absence of a dedicated institution that looks into project planning and implementation also needs consideration

Even with emerging technologies like offshore wind, while it may not have any challenges related to land procurement, it will have to deal with certain unique challenges in addition to the above. These will be logistics, clearances and approvals, and operation and maintenance of these farms. Similarly, repowering and small wind will require certain specific interventions.

To tackle with all above challenges, 12th five year plan recommends the Government of India is planning to launch a National Wind Energy Mission. Towards this, The Ministry of New and Renewable Energy, in January 2014, held a national level consultation to deliberate on a possible mission framework.

About the Initiative and the Organizations

With above background, this initiative aims is to create a "Discussion Forum" for all key challenges being faced by the wind sector, including but not limited to the ones indicated above. The objective is to evolve consensus around such aspects among industry and other key stakeholders through a process of dialogue supported by independent research.

The initiative is supported by Shakti Sustainable Energy Foundation (Shakti), with consulting support from Idam Infrastructure Advisory Private Limited (Idam).

We also feel the need to evolve a common understanding around clearly defined goals for the wind sector over short, medium and long term and associated implementation mechanisms, which assumes importance when the Government plans to launch a National Wind Energy Mission. This forum, comprising wind industry, civil society and policy-makers, will be convened at regular intervals to evolve development and policy approaches that are acceptable to all and practically implementable and provide inputs to the Government.

Shakti Sustainable Energy Foundation (Shakti): At Shakti, we work to strengthen the energy security of the country by aiding the design and implementation of policies that encourage energy efficiency as well as renewable energy. Based on both energy savings and carbon mitigation potential, we focus on four broad sectors: Power, Transport, Energy Efficiency and Climate Policy. We act as a systems integrator, bringing together key stakeholders including government, civil society and business in strategic ways to enable clean energy policies in these sectors.

Idam Infrastructure Advisory Private Limited (Idam): Idam, a part of the IDAM group, is a company established by professionals with vast experience in the domains of energy and infrastructure. From its inception in 2007, Idam team has gathered rich and valuable experience and gained deeper insights across the entire value chain of energy infrastructure. Idam has sound institutional memory of the initiatives that Idam and its staff have worked on, and we use collective experience to provide consulting support to its clients in the energy sector. For this initiative, Idam will develop few thematic papers for discussions at the forum meetings and provide logistical support.

Dr. Pramod Deo, Former Chairperson, Central Electricity Regulatory Commission (CERC), has kindly accepted to chair the Wind Discussion Forum meetings.

Roadmap for Wind Discussion Forum

We envisage multiple wind discussion forum meetings to be held over the next six months targeted at following themes*:

1) **New Business Models-Repowering, Offshore and Wind-Solar hybrids**
2) **Incentive structures and financing**
3) **Wind project development and power procurement methods**
4) **Grid Integration**
5) **Wind Vision 2030 – a consolidation of discussions from the above**

In addition to the four themes, we plan to present the Draft **"Wind Vision - 200 GW by 2030"** document, which will be completed based on inputs received from all the meetings.

For more details, please contact:

Deepak Gupta Sr. Program Manager (Power) Shakti Sustainable Energy Foundation The Capital Court , 104B/2 Fourth Floor, Munirka Phase III New Delhi - 110067 Tel: + 91 11 4747 4000 Mobile: + 91 99109 73331 Email: deepak@shaktifoundation.in Web: www.shaktifoundation.in	**Balawant Joshi** Managing Director Idam Infrastructure Advisory Pvt. Ltd. 801, Crystal Plaza, 158, CST Road Kalina, Santacruz (EAST), Mumbai - 400 098 Tel: + 91 22 4057 0201 Mobile: + 91 98214 21630 Email: balawant.joshi@idaminfra.com Web: www.idaminfra.com

*The themes are indicative. New themes may be identified during the discussions.