Third Quantum Leap in Wind Workshop

4 – 5 June 2012, ADB Headquarters, Manila, Philippines

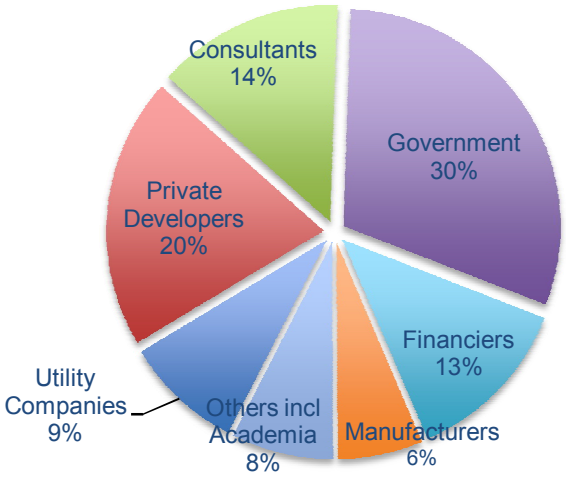
Workshop Highlights

Day 1: Theory vs Practice Through Case-Studies in Asia

Learning Through Case Study Experiences

The first day of the Quantum Leap in Wind Workshop featured a full day of six case-studies of wind projects. Five projects were pioneering projects — the first in the respective countries. At one point, there was standing room only in the room, with an attendance of about 120 representing a wide range of sectors. The sessions were very interactive with lots of questions and comments.

Profile of Workshop Participants



The Case Studies in Brief

Sri Lankan case-study highlighted the struggles of the first project in terms of difficulty in raising debt funds and need for obtaining 165 permits/licenses for the project, even with an attractive tariff (19.5 cents USD). Manjula Perera, the CEO of Wind Force, the developer of this 20MW wind farm said that the private sector stands ready to develop 300-plus MW in Sri Lanka, but the government needs to issue permits and allow the private sector to flourish.

Mongolia case-study was presented by Mr Sukhbaatar, Managing Director of Clean Energy, LLC, who highlighted that even with modest tariff (9.5 cents USD), a wind project can be developed; the expected date for commissioning of the 50MW project is late 2012. The project has been under development for over 5 years. Investment and infrastructure hurdles played a dominant role in the delays. The funds raised are primarily from foreign investors. Their goal is to develop a high quality wind project that is a beacon for future projects.

Philippines case-study was presented by Poch Ambrosio, who highlighted risks to wind projects due to a lack of national policies. The 33MW project signed an initial PPA with the regional utility cooperative, which was later annulled. The project now sells power on the spot market. Since this first project in 2005, wind development has stalled because of uncertainties in the Feed-in-Tariff and Renewable Portfolio Standards.

Pakistan case-study noted that tariff is attractive (cost-plus with up to 17% ROE) along with the government bearing the wind risk and grid availability/connection risk. Security is an issue in Pakistan for foreign developers. Jens Olsen, CEO of Nordex China, the OEM of the first 50MW project is positive about the future in Pakistan.

India case-study was presented by S. Lakshmanan, who spoke about a 22.5MW project in 1999. Data from the government's (CWET) wind mast was used for initial assessment. Standard PPAs for wind are available. Issues now are mostly improvement of the existing systems. The presentation highlighted the amount of tuning during operations and maintenance that must happen of machines, balance of plant and others in order to get the most out of a wind farm.

Thailand case-study by Philip Napier-Moore highlighted a 207MW wind project despite lower wind conditions. The turbines have a capacity of 2.3MW, rotor diameter of 103m and blade length of 49m. Thailand has a mature project finance market for wind projects. The developers take on the wind and grid availability risks. Policy on land use for wind needs to be developed. The project did an exemplary job of engagement and establishment of good relations with the local community at the wind site.

Day 2: What will it take to accelerate wind development in Asia?

Country Updates and Panel Discussions

The second day of the Quantum Leap in Wind Workshop continued the same success of the first. Attendance was high and discussions were spirited. Country and panel experts charted the status of wind power generation in Asia and the Pacific and examined specific policies and developments necessary to propel wind energy forward. Challenging questions were posed and keen insights were shared.

"Asia is energy hungry"

"Dealing with technology is the easy part, dealing with people is the challenge"

"There is a war for renewable energy talent in Asia"

"Capex costs have reduced by 40% in only 4 years"

"Commit to wind energy and with it improve people's lives"

Country Highlights

Afghanistan
Although off-grid wind turbines have not been targets of violent actions, security remains the greatest issue for developers.

Bangladesh
No Feed-in-Tariff is in place. Projects are tendered to the private sector, but the government steps in when there are no takers.

People's Republic of China
Likely to lead the world in installed capacity. Primary constraint is grid limitation. Curtailment is 17 - 25% in some grids.

Fiji
Collapsible turbines have been installed to accommodate for cyclonic conditions. 16 wind monitoring stations are planned.

India
Strong wind prospects. Tax incentive policy of accelerated depreciation to be discontinued. 200 MW demonstration off-shore wind plants planned. Turnkey projects available to reduce lead-time to 6 months.

Mongolia
Despite modest Feed-in-Tariff (9.5 US cents per kwh), wind development has progressed quickly and significantly in recent years. Interconnecting with China will determine the future of wind energy.

Pakistan
Tariff is on a cost-plus basis with 17% ROE. Government is moving towards Feed-in-Tariff regime. Disjoint in policy between federal and local level, in particular on land-use policy.

Philippines
Lack of Feed-in-Tariff and Renewable Portfolio Standards have stalled wind development in the country.

Sri Lanka
Wind development has stalled. There is a prospect of public sector involvement, which would compete with the private sector.

Vietnam
Low Feed-in-Tariff was set in order to attract the best and most efficient wind projects.

Thailand
Focus is now on harnessing low speed and off-shore wind.

Timor-Leste
Wind resource is abundant on the mountain tops. Land use is a problem because of conflicting claims from Indonesia.

Emerging Discussion Points

Feed-in-Tariffs across projects and time cannot be directly compared. They comprise different components and should be seen in the context of the "total package". Focusing on a single number is misleading. Several recommendations were made that ADB should publish an apples-to-apples comparison of tariffs for wind energy.

Grid interconnection and ability to absorb variable wind energy is a major problem in most countries. Innovative solutions are required to make the grid flexible and increase its ability to absorb renewable energy. In China and India, dispatch of wind to load centers and transmission capacity is a big bottleneck.

Land acquisition has been a key source of delays and abandonment in many wind projects. Countries need to institute land reforms and develop legal frameworks to lease public and private land.