InfraCo Asia

Case Study – InfraCo Asia's Metro Wind Power project in Pakistan

Farming wind for energy in Pakistan

This 50 MW project (20 wind turbines at 2.5MW each) in Jhimpir, Sindh province, Pakistan lies in Jhimpir Wind Corridor, the same corridor that extends up to India and has over 2300 MW of Wind Power generation capacity installed on the Indian side. The project will help diversify the fuel source of electricity generation in Pakistan – the country is currently under significant economic duress due to use of high cost fuel for electricity generation. The case of Metro Power Project also demonstrates InfraCo Asia's success in removing barriers to accessing capital for developing infrastructure projects in one of the most politically sensitive countries. It also demonstrates how a large section of the community can be a beneficiary through facilitation of private sector investment in infrastructure projects.

Background

In Pakistan power cuts are common and, with rapidly increasing demand, the situation is only expected to deteriorate. The capacity shortfall in power generation is more than 5,000MW – about a third of the total demand on the system. Load shedding is persistent, which means people in some cities can lose power for up to 10 hours a day, and in rural areas this often increases to up to 18 hours. Recent studies suggest that the effect of this shortage of electricity on business and industry in Pakistan is a loss of 2-3% of the country's annual GDP. Pakistan also relies too heavily on expensive and polluting oil and diesel power plants, which means the energy sector is dependent on imported petroleum fuel. The country needs to dramatically improve its ability to generate sustainable power so that more people in more regions can access reliable energy.

In order to address the sector challenges, the Government of Pakistan in 1995 initiated a policy framework for private sector investment in power generation, with the policy further refined in 2002 and 2009. The National Electric Power Regulatory Authority (NEPRA), established in 1997, has been instrumental in developing the enabling environment, and there are now over 20 independent power producers that provide around 30 percent of installed capacity in the country. Furthermore, the Alternative Energy Development Board (AEDB) has been created to promote the development of renewable energy in Pakistan. It is the AEDB that had issued the Metro Power Company a Letter of Intent (LOI) in 2006.

The Deal

The project requires significant upfront investment which is the norm for the infrastructure projects in power sector, more so in the renewable energy sector. At financial close, capital cost for the project stood at USD131.5 million with the financing structure shown below:

Total Project Investment : US$ 131.5M			
Domestic PSI: US$ 68.4M		DFI: US$ 63.1M	
Equity: US$ 14.8M	Debt: US$ 53.6M	Equity: US$ 18.1M	Debt: US$ 45M
Joint development partner- Alimohamed Family, Pakistan	Leading local commercial banks	IFC, IAD and IAI	IFC and Eco Trade & Development Bank

The Project's offtake for all its electricity generation is under a 20 year Energy Purchase Agreement ("EPA") with National Transmission and Distribution Company Limited ("NTDC"). The project company has also entered into an Implementation Agreement and Land Lease Agreement with the Government of Pakistan to facilitate the implementation of the project. In order to build and run the wind farm, the project company has entered into an EPC and long term O&M Agreement with a consortium of internationally reputed contractors.

PIDG Role

Developmers of infrastructure projects in Pakistan, especially in the power sector, face many challenges including high levels of pre-existing sector borrowing and circular debt coupled with adverse economic conditions and security issues in Pakistan, etc.

The sponsors of the Metro project were burdened with these challenges while raising debt financing for the project. They also lacked expertise in developing wind power projects. InfraCo Asia's involvement in the project, with the key contributions summarized below, provided the necessary thrust to overcome the barriers that the project was facing.

- InfraCo Asia acquired 50% stake in the project which gave the local sponsor the necessary comfort to engage in the project and invest capital for implementation.
- InfraCo Asia's development team initiated detailed discussions with leading Multilaterals, Development Finance Institutions and Commercial Banks. With the team's rich project development expertise, they provided the necessary inputs for project structuring and preparation of bankable documents.
- Involvement of InfraCo Asia through the development team and their restructuring of the project facilitated in attracting commercial lenders to the project.

In addition, a bridge loan of $8.1M from another PIDG facility, InfraCo Asia Investments (IAI) helped achieve financial close in a timely manner. IAI's funding was required to fund the balance equity for the project including contingent support at financial close. Without IAI funding, this project would have been significantly delayed and/or put at risk of ever reaching financial close including, but not limited to, the prospect of losing the project debt secured.

Development Impact

Access to Infrastructure • Improved access to infrastructure – 325,000, including 42,000 who are below the poverty line. • Additional electricity generated - 155.5GWh per year.	
Job creation Short Term Long Term	**600 people** **28 people**
Additional Benefits • **Financial additionality**	

InfraCo Asia arranged a timely and efficient financial restructuring for the project that had previously stagnated. InfraCo Asia's expertise was deployed to prepare the necessary documentation to raise commercial financing, while also demonstrating how to arrange optimal non-recourse project financing.

- **Environmental benefits**

Reduces reliance on fossil fuels with carbon emissions cut by 73,000 tonnes a year. Secure source of energy at significantly lower cost: 14-16 cents per kWh compared to 20-25 cents per kWh for oil/diesel generation.

- **Demonstration effect**

Establishes the potential for PSI in renewable energy and other infrastructure projects in Pakistan. Promotes transfer of technical knowledge and acts as a pioneer in promoting the spread of renewable technology.

- **Social and Community Development benefits**

The project company has benefited a village of approximately 200 people which is located within the project site. To begin with, additional spacing between wind turbine towers has prevented displacement of people and disturbance (shading and noise levels). Moreover, adults from the village have also been trained and are now employed for the construction and potentially the operation and maintenance of the project. Lastly, as illustrated below, the project company has built water wells, pumps and a school (where boys and girls jointly get education) in the village.