



**Opportunities to Co-finance Wind Energy Projects in
South Asia**

**Under the Infrastructure Window of SAARC
Development Fund**

A

Thematic Concept Note

- I. Title of the theme**
Co-financing of Wind energy generation projects and associated supply chain: Co-financing of wind energy projects along with associated supply chain in SAARC Member States.

- II. Overview of the theme**
The theme predominantly captures the potential opportunities in generation of wind energy projects in SAARC Member States with focus on Afghanistan, Bangladesh, India, Maldives, Pakistan and Sri Lanka. Development of indigenous technology and competence in energy generation projects within the region can address the issues of climate change and pave ways to enhancement of renewable energy portfolio of SAARC Member States.

- III. Rationale of the theme**
Wind power not only addresses the challenges of energy security, climate change and access to energy for all, it is also becoming increasingly cost competitive. In markets such as the European Union which accounts for carbon emission costs, projected costs indicate that wind is a cheaper alternative to coal and gas. Evidence shows that even when not including externalities, the levelized cost of wind energy is approaching the cost of new build coal-fired energy production. Wind energy is abundant in most South Asian countries yet installed wind capacity is currently only a fraction of realizable potential. Therefore there is good potential of harnessing wind energy facilities in South Asia.

- IV. Power Consumption Scenario in South Asia**
Power consumption varies significantly across South Asia with the region as a whole having per capita power consumption of 707 kWh in comparison to the world average of 3125 kWh. Further South Asia has 706 million people without electricity out of 1.6 billion people globally.

- V. Access to Electricity – Instrumental in Regional Integration and Cooperation**
Electricity is critical to the socioeconomic development of any country. The availability of reliable and quality power at competitive rates is imperative for a competitive industry. It is also a critical input to development and sustenance of various infrastructure and its services. Regional trade in electricity will boost the economic connectivity in the region and would be instrumental in meeting the objectives of regional integration and cooperation in the region.

- VI. Supply Chain for Wind Energy Projects**
Cooperation and partnership within the SAARC Member States can facilitate development of indigenous supply chain for wind generation facilities within the region to enable to meet the cost effective demand of both technology and equipments.

VII. Country Scenario – Wind Power Generation Potential

Afghanistan – Opportunities

- Afghanistan is rich in renewable energy resources and has a strong culture of commerce and trade.
- Hybrid Small Wind Turbines with diesel, PV and batteries are promising options to supply electricity for rural electrification or for small grids.
- Up to 8 m/sec wind speeds are reported. The lowlands in southern and western Afghanistan have around 120 windy days in a year.

Bangladesh – Opportunities

- Small Wind Turbines (SWT) are widely considered the most appropriate option for Bangladesh given its land use constraints. They can be transported and installed with minimum land and infrastructure requirement.
- Large Utility-Scale Turbines may be viable in coastal and higher altitude areas.

India – Opportunities

- Access to low cost turbines from competitive local wind turbine manufacturers.
- Availability of small to large-scale investments in the wind industry. Wind turbine manufacturers provide turn-key solutions for wind projects. Traditionally, investments were pooled from large numbers of small investors with an appetite for tax credits. Independent Power Producers are increasingly becoming part of the wind energy market as an alternative to manufacturer driven development.

Maldives – Opportunities

- Small-scale wind projects suitable for Maldives. The dispersed nature of the islands makes it ideal for a distributed generation. Each inhabited island operates and maintains its own power generation and power distribution system.
- Majority of the islands have relatively low demand due to small populations. Most outer and remote islands 'energy demand is under 500kW, providing good opportunity for hybrid wind-diesel or wind-solar systems.
- Closer islands'(small clusters of islands in the same atoll with shallow lagoons in between) grids can be potentially connected to provide several RE generating facilities pumping energy into the grid, increasing reliability through redundancy and better management of loads.

Pakistan – Opportunities

- Very good wind potential in Southern and western part of Pakistan, specifically in Gharo-Keti, Bandar, and Jhampir wind corridors.

- Attractive renewable energy incentives are provided by the Government through its Renewable Energy Policy and Mid-term Policy. Government bears the wind and grid availability/connection risk.
- Tariff is attractive

Sri Lanka – Opportunities

- Government offers high feed-in-tariff
- The country benefits from consistent winds over flat landscapes in the south-eastern and north-western coastal belt. But winds over mountainous regions are highly site specific

VIII. SAARC Development Goals in line with Sustainable Development Goals

SAARC Development Goals are in harmony with UN Sustainable Development Goals. Development of Cross Border Regional Infrastructure in SAARC region will ultimately achieve the larger mandate of Livelihood, Health, Education and Environment Sustainable Development Goals.

IX. Potential Opportunity to Co-financing Cross Border Hydropower Projects

Development of Wind Generation Facilities in SAARC Member States provides potential opportunities for various Multilateral Development Banks, Regional Financial Institutions, Infrastructure Financing Agencies and various Commercial Banks to co-finance various Wind energy projects in South Asia.

X. Way Forward

SAARC Development Fund proposes to form a **Project Development and Working Group (PDWG)** among all the potential Multilateral Development Banks, Regional Financial Institutions, Infrastructure Financing Agencies and various Commercial Banks to work together with Governments of SAARC Member States and Private sector to develop Wind Energy facilities in SAARC Member States.

XI. Contact

Chief Executive Officer at ceo@sdfsec.org

Director, Economic and Infrastructure Windows at rajeev@sdfsec.org

Assistant Director, Economic and Infrastructure Windows at zeeshan@sdfsec.org

**SAARC Development Fund, III Floor, BDBL Building, Norzin Lam, Post Box No 928,
Thimphu, Bhutan, Ph No: +975-2-321152/53**