Sri Lanka: Wind Power Generation Project

### Project Name
Wind Power Generation Project

### Project Number
49345-002

### Country
Sri Lanka

### Project Status
Active

### Source of Funding / Amount
| Loan 3585-SRI: Wind Power Generation Project | Ordinary capital resources | US$ 200.00 million |

### Strategic Agendas
- Environmentally sustainable growth
- Inclusive economic growth

### Drivers of Change
- Governance and capacity development
- Knowledge solutions

### Sector / Subsector
Energy - Renewable energy generation - wind

### Gender Equity and Mainstreaming
No gender elements

### Description
The impact of the investment project will be increased access to clean and reliable power supply enhanced by 2025. The outcome will be clean power generation increased.

(i) Wind power generation increased. This output consists of three subcomponents: (i) 100 MW wind farm constructed in Mannar Island in the Northern Province; (ii) wind park infrastructure developed that involves construction of the wind park's internal medium voltage infrastructure, internal cabling, access roads, and other arrangements; and (iii) a renewable energy dispatch control center established to forecast, control, and manage intermittent 100 MW wind power generation.

(ii) System reactive power management improved. This includes installation of 100 megavolt-ampe reactive (MVAr) reactors at the 220 kilovolt (kV) level at the Anuradhapura grid substation in the North Central Province and a 50 MVAr reactor at the 220 kV level at the Mannar grid substation in the Northern Province to manage voltage levels within the planning limits and practical operational requirements, and ensure reliable operation of the wind park.

(iii) Capacity of CEB in project engineering design review and supervision strengthened. Expert consultancy services will be procured to strengthen CEB's capacity in project engineering design, review, and supervision. These advisory consultancy services will assist CEB in ensuring engineering oversight of wind turbine installation, commissioning and testing activities, and technical certification of contractor's activities throughout the construction period.

### Project Rationale and Linkage to Country/Regional Strategy
Sri Lanka's energy sector performance has achieved a national electrification ratio of 99.3% (2016) up from 29% in 1990. However, the sector continues to struggle in meeting the growing demand for electricity at sufficiently low cost and acceptable reliability. The share of thermal power in the generation mix remains high at 67.2% in 2016 as the entire demand growth has been served by oil-fired thermal (31.5%) and coal (35.7%) generation. Although 32.7% of the total generated power provided to the grid in 2016 was from renewable sources, including 24.6% large hydropower, 5.2% small hydropower, 2.4% wind power, and 0.6% other sources, the high share of oil-fired thermal generation makes electricity expensive due to high fuel prices and poses a serious threat to the country's energy security and the environment. There is an urgent need to develop other clean energy sources in addition to hydropower, undertake loss reduction efforts, and address energy efficiency issues. Diversification to renewable energy sources, such as wind and solar energy, will improve the country's energy security and the environment. In particular, developing wind power generation by both the public and private sectors and through public private partnerships provides substantial opportunities to reach the country's goal of increasing the share of nonconventional renewable energy generation to 20% of the total generated power by 2020.

The Government of Sri Lanka aims to ensure the sustainable development of energy resources by improving the power supply systems to guarantee that the entire population has access to electricity services. Sri Lanka has a national sector investment program that is based on the National Energy Policy and Strategies of Sri Lanka. The policy and strategies include a sector road map, and policy and reform measures. To reduce the current high cost of thermal power generation and attain cost recovery, the government developed 900 MW of low cost coal-fired capacity that became fully operational in 2014. The government aims to increase supply capacity from renewable energy sources and potential future conversion of the oil-fired plants to gas-fired plants. The policies and incentives for developing renewable energy sources exist in the country. The increase to 20% of power generation from nonconventional renewable energy sources, including their current generation, will be in addition to 24.6% (2016) of conventional hydropower and will ensure that, in the future, a substantial portion of electricity is generated by domestic clean energy sources. This will address the critical issue of energy security.

### Impact
Access to clean and reliable power supply in Sri Lanka enhanced by 2025 (Sri Lanka Energy Sector Development Plan for a Knowledge Based Economy, 2015-2025)

### Project Outcome

#### Description of Outcome
Clean power generation increased

#### Progress Toward Outcome
Implementation is ongoing.

### Implementation Progress

#### Description of Project Outputs
1. Wind power generation capacity increased
2. System reactive power management improved
3. Capacity of CEB in project engineering design review and supervision strengthened

#### Status of Implementation Progress (Outputs, Activities, and Issues)
All the contract packages under this Project had been awarded and implementation is ongoing.

### Geographical Location
Mannar District

### Safeguard Categories
No gender elements

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**Country/Regional Strategy**

- Renewable energy generation - wind
**Environment**

**Involuntary Resettlement**

**Indigenous Peoples**

**Summary of Environmental and Social Aspects**

**Environmental Aspects**

**Involuntary Resettlement**

**Indigenous Peoples**

**Stakeholder Communication, Participation, and Consultation**

**During Project Design** Extensive consultations with the government and stakeholders, including local communities, local authorities, focal groups, civil society groups, will be undertaken to ensure participatory approach. The stakeholders will be consulted throughout the design stage during the project preparatory technical assistance and the ensuing project implementation on the relevant issues, including environmental, social and other issues that may affect communities and poor people.

**During Project Implementation** The consultation process with the stakeholders will continue during project implementation as per Sri Lankan regulations.

**Business Opportunities**

**Consulting Services** Consultants will be recruited following Guidelines on the Use of Consultants by ADB and Its Borrowers, March 2013.

**Procurement** Procurement will follow international and national competitive bidding depending on an estimated value of procurement packages. Advance contracting will be used for procurement. Retroactive financing may be considered to expedite project implementation at government's request.

**Responsible ADB Officer** Jaimes Kolantharaj

**Responsible ADB Department** South Asia Department

**Responsible ADB Division** Energy Division, SARD

**Executing Agencies** Ceylon Electricity Board

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**Loan 3585-SRI**

**Milestones**

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**Financing Plan**

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**Project Page** https://www.adb.org/projects/49345-002/main

**Request for Information** http://www.adb.org/forms/request-information-form?subject=49345-002

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