Sri Lanka: Wind Power Generation Project

Project Name: Wind Power Generation Project

Project Number: 49345-002

Country: Sri Lanka

Project Status: Active

Project Type / Modality of Assistance: Loan

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. The outputs of the investment project are:

1. 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.

2. System reactive power management improved. This includes installation of 100 megavolt-ampere 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.

3. 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 800 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): Implementation is ongoing.

Geographical Location: Mannar District

Safeguard Categories

No gender elements
### Environmental Aspects

#### Involuntary Resettlement

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.

#### Indigenous Peoples

During Project Design

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

Kolantharaj, Jaimes

### Responsible ADB Department

South Asia Department

### Responsible ADB Division

Energy Division, SARD

### Executing Agencies

Ceylon Electricity Board  
3rd Floor, G.O.B.A. Bldg.  
#56, Sir Chitampalam A. Gardiner Mawatha  
Colombo 02, Sri Lanka

### Timetable

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Concept Clearance</td>
<td>23 Mar 2016</td>
</tr>
<tr>
<td>Fact Finding</td>
<td>14 Feb 2017 to 24 Feb 2017</td>
</tr>
<tr>
<td>MRM</td>
<td>09 Jun 2017</td>
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<tr>
<td>Approval</td>
<td>24 Oct 2017</td>
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<td>Last Review Mission</td>
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<td>Last PDS Update</td>
<td>21 Sep 2018</td>
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### Loan 3585-SRI

#### Milestones

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<th>Effectivity Date</th>
<th>Closing</th>
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#### Financing Plan

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<th>ADB</th>
<th>Others</th>
<th>Net Percentage</th>
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<tbody>
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<td>Project Cost</td>
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<td>Cumulative Contract Awards</td>
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<td>ADB</td>
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<td>Counterpart</td>
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<td>Cumulative Disbursements</td>
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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

### Date Generated

02 June 2019

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