



## Viet Nam: Northern to Central 500 kV Transmission Grid Reinforcement Project

Project Name	Northern to Central 500 kV Transmission Grid Reinforcement Project				
Project Number	51093-002				
Country	Viet Nam				
Project Status	Approved				
Project Type / Modality of Assistance	Loan				
Source of Funding / Amount	<table border="1"> <tr> <td colspan="2"><b>Loan: Northern to Central 500 kV Transmission Grid Reinforcement Project</b></td> </tr> <tr> <td>Ordinary capital resources</td> <td>US\$ 200.00 million</td> </tr> </table>	<b>Loan: Northern to Central 500 kV Transmission Grid Reinforcement Project</b>		Ordinary capital resources	US\$ 200.00 million
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Ordinary capital resources	US\$ 200.00 million				
Strategic Agendas	Inclusive economic growth				
Drivers of Change	Private sector development				
Sector / Subsector	<b>Energy</b> - Electricity transmission and distribution				
Gender Equity and Mainstreaming	No gender elements				
Description	<p>The project will support the Socialist Republic of Viet Nam in the implementation of its Revised National Power Development Master Plan 2011 2020 (Revised PDP VII). The project will (i) construct three new 500 kilovolt (kV) transmission lines [approximately 362 double circuit-kilometer (cct-km)] from northern to central Viet Nam to reach the grid reliability standard N-1, ensuring more reliable power supply to load centers and (ii) install an intelligent transmission line monitoring system for efficient and proactive operation and maintenance of transmission lines. The use of high temperature with low sag conductors and/or low losses conductors will also be reviewed for increasing reliability and reducing technical losses of the grid. The project will contribute to provide adequate and reliable power supply to sustain economic growth, and expand employment and income-generating opportunities articulated in the socioeconomic development strategy of Viet Nam. It is included in the draft Country Operations Business Plan 2018 2020.</p>				
Project Rationale and Linkage to Country/Regional Strategy	<p>One of the core problems in the power sector is insufficient power grid infrastructure to provide adequate and reliable electricity supply to support economic development. In Viet Nam, there is an imbalance between power generation and power demand across regions. The southern region is the biggest power load center accounting for about 50% of total power demand in the country. However, this region is short on generating capacity while the northern and central regions are in surplus. A single 500 kV backbone transmission line (about 1,487 cct-km) completed in 1994 is currently the only connection between the northern and southern region. However, this overloaded line has reliability concerns due to occasional power faults that cause blackouts in some parts of the southern region. To address this issue, the National Power Transmission Corporation (NPT) is currently constructing a new 500 kV transmission line from the central to the southern region, and seeks ADB support for a new 500 kV transmission line from the northern to the central region.</p> <p>Annual electricity demand growth in Viet Nam averaged 12.0% during 2005 2015. The peak demand grew from 9.5 gigawatts (GW) to 24.2 GW and total installed generation capacity increased from 11.6 GW to 38.9 GW over the period. The Revised PDP VII also projects the average power demand growth at 10.5% through 2020 and 8% during 2021 2030. Generation expansion plans to accommodate this power demand growth require commensurate transmission grid expansion.</p> <p>To address this challenge, the government prepared the master plan for the development of power grids in the Revised PDP VII, which includes: (i) upgrading power transmission grids to reach the grid reliability standard N-1; (ii) addressing overload incidents and low voltage quality, ensuring a higher degree of reliability; (iii) constructing 500 kV transmission lines to connect to large load centers; and (iv) constructing 200 kV double-circuit transmission lines where applicable, all with highest technological specifications.</p> <p>Based on the master plan for the development of power grids, the government prioritizes a new 500 kV transmission line from the northern to the central region for ADB financing, which comprises three segments: (i) a Nam Dinh-Thanh Hoa transmission line, (ii) a Thanh Hoa-Quynh Lap transmission line, and (iii) a Quynh Lap-Vung Ang transmission line.</p> <p>The proposed project is aligned with the Viet Nam country partnership strategy (2016 2020) and consistent with the Viet Nam Energy Sector Assessment, Strategy, and Road Map. The transaction technical assistance for the project is included in the country operation business plan (2017 2019).</p>				

Impact Adequate and reliable power supplied (National Power Development Master Plan 2011-2020 with vision to 2030)

### Project Outcome

Description of Outcome Power Transmission grid efficiency and reliability from the Northern to Central region increased

Progress Toward Outcome

### Implementation Progress

Description of Project Outputs 500 kV transmission line from the Northern to Central region constructed.  
Intelligent transmission line monitoring system installed and operation capacity improved.

Status of Implementation Progress (Outputs, Activities, and Issues)

Geographical Location

### Safeguard Categories

Environment B

Involuntary Resettlement A

Indigenous Peoples B

### Summary of Environmental and Social Aspects

Environmental Aspects

Involuntary Resettlement

Indigenous Peoples

### Stakeholder Communication, Participation, and Consultation

During Project Design

During Project Implementation

### Business Opportunities

Consulting Services A consulting firm will be engaged to provide consulting services including 26 person-months of international consultants and 28 person-months of national consultants who are experts in the areas of power transmission grid, procurement, economy, finance, safeguards (environment and social resettlement), smart grid, and climate change. Recruitment will be by quality- and cost-based selection method with a technical: financial weighting of 90:10. The consultants will be engaged by ADB in accordance with ADB Procurement Policy and Procurement Regulations for ADB Borrowers, 2017

Responsible ADB Officer Jung, Choon Sik

Responsible ADB Department Southeast Asia Department

Responsible ADB Division Energy Division, SERD

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Ha Noi*

### Timetable

Concept Clearance 11 Sep 2017

Fact Finding 03 Jun 2019 to 07 Jun 2019

MRM 31 Oct 2019

Approval 26 Mar 2020

Last Review Mission -

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Project Page	<a href="https://www.adb.org/projects/51093-002/main">https://www.adb.org/projects/51093-002/main</a>
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