



Viet Nam: Ha Noi and Ho Chi Minh City Power Grid Development Sector Project

Project Name	Ha Noi and Ho Chi Minh City Power Grid Development Sector Project								
Project Number	46391-001								
Country	Viet Nam								
Project Status	Active								
Project Type / Modality of Assistance	Loan								
Source of Funding / Amount	<table border="1"><tr><td colspan="2">Loan 3161-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project</td></tr><tr><td>Ordinary capital resources</td><td>US\$ 172.70 million</td></tr><tr><td colspan="2">Loan 8286-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project</td></tr><tr><td>ASEAN Infrastructure Fund</td><td>US\$ 100.00 million</td></tr></table>	Loan 3161-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project		Ordinary capital resources	US\$ 172.70 million	Loan 8286-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project		ASEAN Infrastructure Fund	US\$ 100.00 million
Loan 3161-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project									
Ordinary capital resources	US\$ 172.70 million								
Loan 8286-VIE: Ha Noi and Ho Chi Minh City Power Transmission Development Sector Project									
ASEAN Infrastructure Fund	US\$ 100.00 million								
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth								
Drivers of Change	Partnerships								
Sector / Subsector	Energy - Electricity transmission and distribution								
Gender Equity and Mainstreaming	No gender elements								
Description	The project will strengthen the capacities and reliabilities of the power infrastructure in the two largest cities of the Socialist Republic of Viet Nam (Viet Nam)_Ha Noi and Ho Chi Minh City_through rehabilitation, expansion and development of the 220 kilovolt (kV) and 110 kV electricity power grids in the respective cities. The Government of Viet Nam has requested for a sector loan from ADB's OCR and a sector loan funded through participation of the AIF to assist with the financing of the project. The project is included in the country partnership strategy, 2012_2015 for Viet Nam.								

Project Rationale and Linkage to Country/Regional Strategy

Socioeconomic Context and Sector Performance. Viet Nam's economy grew at an average rate of 6.3% per annum and gross domestic product per capita increased from \$699 to \$1,755 during 2005-2012. Economic growth was accompanied by an average electricity demand growth of 12.5% per annum during 2005_2012, while per capita consumption increased from 156 kWh in 1995 to 1,187 kWh in 2012. Viet Nam has also made notable achievements in increasing the household electrification rate from 50% in 1995 to over 97% by 2012, while reducing the poverty rate from 15.5% in 2006 to 11.1% in 2012.

Institutional Arrangement. The Ministry of Industry and Trade has policy and supervisory responsibilities for the energy sector, both as the line ministry and as the ministry with oversight responsibility for the state-owned energy enterprises. Vietnam Electricity (EVN), the main power utility in Viet Nam, is organized as a holding company with a series of wholly owned subsidiaries including the three Power Generation Corporations, the National Power Transmission Corporation responsible for the 500 kV and 220 kV transmission system, and the five Power Corporations responsible for the distribution and retail of electricity at voltage levels below 110 kV but also developing and operating 220 kV assets in their respective licensed areas. Hanoi Power Corporation (EVN HANOI) and Ho Chi Minh City Power Corporation (EVN HCMC), in particular, are the Power Corporations responsible for the largest load centers. Ha Noi and Ho Chi Minh City account for 16% of the total population.

Sector Challenges and Opportunities

Technical. Expanding the power system capacity in a sustainable manner to meet the rapidly growing electricity demand is a key priority of the government. According to the National Power Development Plan between 2011 and 2020 with Orientation Towards 2030 (PDP7), demand is expected to continue growing rapidly from 120 TWh in 2012 to 330 TWh in 2020 and potentially up to 700 TWh in 2030. To meet the growing demand, generation capacity is to be strengthened from 26.5 GW in 2012 to 75 GW in 2020. Nearly 44,000 km of 500 kV and 75,000 km of 220 kV lines will also be constructed to effectively transmit the generated power to the load centers. Total investment for the power sector up to 2020 is estimated to be \$48.8 billion, of which \$16.3 billion is for grid augmentation.

In the distribution subsector, particularly in Ha Noi and Ho Chi Minh City, their combined peak load of over 6.1 GW in 2012 or 23% of the total domestic load, is expected to nearly double to 11.2 GW by 2020. The investment needs up to 2015 for EVN HANOI and EVN HCMC are \$987 million and \$997 million, respectively.

Financial. The foremost challenge of the power utilities is to mobilize the vast financing needed to meet the above investment requirements while maintaining their financial sustainability. Although there are some non-EVN domestic and foreign investments in power generation, a large share of EVN's investments are financed by loans from commercial banks and development partners. The external borrowings of EVN HANOI and EVN HCMC are projected to be about \$130 million and \$80 million, respectively, per year on average during 2014_2015.

The retail tariff schedules are set by the government uniformly across the whole country. While the average retail tariff has increased by 79% in nominal terms during 2007_2013, it has decreased by 15% in real terms. Moreover, the current average retail tariff of about D1,500/kWh (7.14/kWh) is much lower than the long-run marginal cost estimated to be in the range of 8-9/kWh. Adequate and gradual tariff increase is required to ensure the long-term financial sustainability of the power sector.

Power Sector Reform and Modernization. Viet Nam's sector reform program process dates back to 1995, while ADB has supported the reform through six technical assistances between 1995 and 2009. The 2004 Electricity Law provided the legal basis for the ongoing reform being implemented in accordance with the roadmap for establishing an electricity market in three phases: (i) Phase 1_competitive generation market until 2014; (ii) Phase 2_pilot competitive wholesale market from 2015, and full implementation from 2017; and (iii) Phase 3_competitive retail market from 2021. Phase 1 was launched in July 2012 with the legal unbundling of the three Power Generation Corporations. The Electricity Regulatory Authority of Viet Nam (ERAV) is currently preparing Phase 2 with the support of development partners, whereas ADB will dispatch resident advisors to assist ERAV through an existing technical assistance. Further technical assistances to prepare ERAV and the market participants are also being discussed and coordinated with the development partners.

The government aims to reduce its energy intensity and increase reliability of power supply through system modernization and removal of constraints in the power grid. Viet Nam's elasticity ratio of electricity demand growth rate against gross domestic product growth rate has averaged around 2.0. PDP7 calls for reducing it to 1.5 by 2015 and to 1.0 by 2020. EVN has made a steady reduction of system losses from 12.2% in 2003 to 9.2% in 2012. At the distribution level, EVN HANOI targets reducing its losses from 7.1% in 2012 to 6.0% by 2020, while EVN HCMC plans to reduce it from 5.6% in 2012 to 5.0% in 2020. To further improve system reliability, both Power Corporations target reducing their respective system average interruption duration indexes by 30_40% by 2014 compared to 2012 levels. The present indexes are very high compared to developed country utility standards, due to antiquated equipment and inadequate capacities of the networks causing overloadings and short-circuits.

Impact	Growth in national electricity demand is met in a sustainable manner
--------	--

Project Outcome

Description of Outcome	Improved reliability and efficiency of electricity supply in Ha Noi and HCMC
Progress Toward Outcome	The project is still in the early stage of implementation to be able to confirm substantial improvement on reliability and efficiency of electricity supply in Ha Noi and HCMC.

Implementation Progress

Description of Project Outputs	<p>Four core substation and transmission line subprojects in Ha Noi developed and/or rehabilitated</p> <p>Four core substation and transmission line subprojects in HCMC developed and/or rehabilitated</p> <p>Up to 20 noncore substation and transmission line subprojects in Ha Noi developed and/or rehabilitated</p> <p>Up to nine noncore substation and transmission line subprojects in HCMC developed and/or rehabilitated</p>
Status of Implementation Progress (Outputs, Activities, and Issues)	<p>- With the completion of the 110 kV Noi Bai substation, 50 MVA and 10 cct-km of 100 kV transmission lines had been developed. Another 110 kV substation core subproject in Son Tay is almost complete while the other two Hanoi core subprojects are still finalizing the technical design.</p> <p>- Goods and works contracts have been awarded for all four core subprojects in HCMC. Two subprojects have been completed, recording development of 126 MVA of 110 kV substation and 4.3 cct-km of transmission lines while the other two have recorded 10% physical progress.</p> <p>- With the completion of three Hanoi noncore subprojects, 126 MVA of 110 kV substation have been developed/ expanded; 10.4 cct-km of 110 kV transmission lines and 8.2 cct-km of 220 kV transmission lines have been developed.</p> <p>- Six contracts under three HCMC noncore subprojects have been awarded but project implementation is still at the initial stages.</p>
Geographical Location	

Safeguard Categories

Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects

Environmental Aspects	Environmental impacts and mitigation/monitoring measures have been assessed under the PPTA.
Involuntary Resettlement	Involuntary resettlement impacts and mitigation/monitoring measures have been assessed under the PPTA.
Indigenous Peoples	Indigenous peoples are not involved.

Stakeholder Communication, Participation, and Consultation

During Project Design	Project stakeholders were consulted during project design.
During Project Implementation	Throughout the implementation of all subprojects, consultation with local governments, local communities, non-governmental organizations and other stakeholders will be done.

Business Opportunities

Consulting Services	Individual Consultant Selection (ICS) was adopted in contracting consulting services.
Procurement	<p>All procurement of goods and services under the ADB financing will be undertaken in accordance with ADB's Procurement Guidelines and the procurement plan for the project.</p> <p>To ensure competitive bidding, international competitive bidding contract packages will be adopted. International competitive bidding will be used for Goods over \$3 million and for Works over \$5 million. ADB's prior review procedures will be followed. The Borrower agreed to include the relevant sections of ADB's Anticorruption Policy (1998) in all bidding and contractual documents. Installation and commissioning works will be undertaken by contractors through national competitive bidding (NCB).</p>

Responsible Staff

Responsible ADB Officer	Au, Tuan Minh
Responsible ADB Department	Southeast Asia Department
Responsible ADB Division	Viet Nam Resident Mission

Executing Agencies

Hanoi Power Corporation
 DAOQUANGMINHDLHT@YAHOO.COM.VN
 69 Dinh Tien Hoang Street, Hoan Kiem District
 Ha Noi, Viet Nam
 Ho Chi Minh City Power Corporation
 BAOPQ@HCMPC.COM.VN
 35 Ton Duc Thang Street, Ben Nghe Ward District 1

Timetable

Concept Clearance	02 Nov 2012
Fact Finding	10 Dec 2013 to 20 Dec 2013
MRM	27 Feb 2014
Approval	23 Sep 2014
Last Review Mission	-
Last PDS Update	27 Mar 2017

Loan 3161-VIE

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
23 Sep 2014	07 Nov 2014	06 Feb 2015	31 Dec 2020	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	294.27	Cumulative Contract Awards			
ADB	172.70	23 Sep 2014	46.92	0.00	27%
Counterpart	121.57	Cumulative Disbursements			
Cofinancing	0.00	23 Sep 2014	24.29	0.00	14%

Loan 8286-VIE

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
23 Sep 2014	07 Nov 2014	06 Feb 2015	31 Dec 2020	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	100.00	Cumulative Contract Awards			
ADB	0.00	23 Sep 2014	0.00	27.12	27%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	100.00	23 Sep 2014	0.00	13.50	13%

Project Page	https://www.adb.org/projects/46391-001/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=46391-001
Date Generated	06 July 2017

ADB provides the information contained in this project data sheet (PDS) solely as a resource for its users without any form of assurance. Whilst ADB tries to provide high quality content, the information are provided "as is" without warranty of any kind, either express or implied, including without limitation warranties of merchantability, fitness for a particular purpose, and non-infringement.

ADB specifically does not make any warranties or representations as to the accuracy or completeness of any such information.