



## Indonesia: Electricity Grid Strengthening—Sumatra Program

Project Name	Electricity Grid Strengthening—Sumatra Program								
Project Number	49080-001								
Country	Indonesia								
Project Status	Active								
Project Type / Modality of Assistance	Loan								
Source of Funding / Amount	<table border="1"><tr><td colspan="2"><b>Loan 3339-INO: Electricity Grid Strengthening_Sumatra Program</b></td></tr><tr><td>Ordinary capital resources</td><td>US\$ 575.00 million</td></tr><tr><td colspan="2"><b>Loan 8297-INO: Electricity Grid Strengthening_Sumatra Program</b></td></tr><tr><td>ASEAN Infrastructure Fund</td><td>US\$ 25.00 million</td></tr></table>	<b>Loan 3339-INO: Electricity Grid Strengthening_Sumatra Program</b>		Ordinary capital resources	US\$ 575.00 million	<b>Loan 8297-INO: Electricity Grid Strengthening_Sumatra Program</b>		ASEAN Infrastructure Fund	US\$ 25.00 million
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ASEAN Infrastructure Fund	US\$ 25.00 million								
Strategic Agendas	Inclusive economic growth								
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships Private sector development								
Sector / Subsector	<b>Energy</b> - Electricity transmission and distribution								
Gender Equity and Mainstreaming	No gender elements								
Description	<p>One of the priorities in the Government of Indonesia's National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional or RPJMN), 2015_2019 is to enhance domestic energy security. Within the sector, the Electricity Power Supply Business Plan (Rencana Usaha Penyediaan Tenaga Listrik or RUPTL) provides a ten-year plan (2015_2024) which also includes a five-year Electricity Development Plan with specific targets for 2015_2019. The government is now calling for expanding power generation capacity across Indonesia by an additional 35 gigawatts (GW) from 2015 to 2019 to achieve 7% economic growth and alleviate existing grid constraints of which 9 GW is to be installed in Sumatra. The program will contribute to PLN's overarching power development plans for Sumatra as identified in the RUPTL 2015_2024. A stronger transmission system with robust distribution networks will increase reliability of connections with industrial, commercial, and residential customers. At the impact level, the program is aligned with the RUPTL's goal of enhancing the quality of life in Indonesian society by the sustainable use of electricity as a key driver of increased economic activity. The expected outcome of the RBL program is that the adequacy and reliability of power supply are achieved for Sumatra. This adequacy and reliability is defined by the outcome indicators, which are measured against realistically set targets. The outcome is linked to all five Results Areas in the national electricity results framework and the key performance indicators for the RBL program outcome are identical or similar to those used by PLN in their own Results Areas (increase in number of customers, electricity sales, and customer satisfaction). In RBL modality, disbursement-linked results consist of disbursement-linked indicators (DLIs) that can include development outcomes, intermediate outcomes, outputs, and institutional strengthening.</p>								

Project Rationale and Linkage to Country/Regional Strategy	<p>Having realized that the energy sector may well become an impediment to the country's future economic prospects, the government is refocusing its efforts on the sector. Expanding energy infrastructure and increasing investments in the sector is a key mandate of the incumbent government which is taking the necessary steps to diversify the country's energy mix, reduce its dependence on imported fuels, move towards cost-reflective electricity and energy prices, rely more on indigenous sources of energy, and lower greenhouse gas emissions. It is also improving the regulatory framework and strengthening the enforcement of existing regulations. This will therefore also require a substantive and sustained multi-year effort to improve and strengthen the country's power transmission and distribution networks and regional grids to deliver the power from its generation points to the load centers across the country and promote industrial development of the regions.</p> <p>The overall investment needs for the 35 GW program covering generation, transmission, and distribution are \$83.5 billion of which \$43.5 billion is to come from the private sector and the balance \$40 billion to be covered by PLN. The government and PLN will not be able to meet the investment needs on their own. For achieving the expansion targets by 2019, PLN has a funding gap of \$30.3 billion of the \$40 billion required which will have to be borne by other financing sources such as the private sector, commercial banks, and other development partners. The electric power system is made up of separate island grids comprising eight interconnected networks and 600 isolated grids. Sumatra currently accounts for about 25% of Indonesia's gross domestic product and has the second-largest electricity system in the country with an installed capacity of about 6,000 megawatts (MW) in 2013 but despite that, it suffers from an average power deficit of 250 MW. The government is keen to boost Sumatra's productivity which implies strengthening its existing power grid and increasing the generating capacity to around 15,000 MW.</p> <p>According to the RUPTL 2015_2024 and PLN's estimates, the total investment needed for this program focusing on the expansion and strengthening of Sumatra's transmission and distribution systems for 2015_2019 is \$7.36 billion and adding program management, social and environmental safeguards implementation, and taxes and duties puts the overall Sumatra program expenditure at \$10,835 million. In light of the large investment needs, a focused programmatic approach by the Asian Development Bank (ADB) against the backdrop of the government and PLN's strong nationwide 35 GW program will promote a longer and broader engagement and enhance collaboration to achieve the intended results. Due to the size of this program, cofinancing is needed and the World Bank is also stepping in with a \$500 million loan for Sumatra using a program for results (PforR) modality to further complement ADB's support. A series of ADB financed results-based loans with a commitment of at least \$2 billion focusing on the Sumatra program during 2015_2019 will help achieve the objectives set by the RUPTL 2015_2024, which are to further expand access to electricity in Sumatra and stimulate greater investments in the region. This will contribute to the overall government vision of developing Sumatra as a major industrial center, enhancing regional growth, and connecting it to both Java and Peninsular Malaysia by 2020. Additional RBL loans to support programs for the Java-Bali and Easter Indonesia power grids are also being discussed between ADB and PLN. The proposed Electricity Grid Strengthening - Sumatra program will take a results-based lending (RBL) programmatic approach in consultation with PLN and government over the five-year RPJMN period with a series of programs anchored to PLN's RUPTL 2015_2024. This will ensure a long-term continuous engagement for the strengthening of the Sumatra power grid and ensuring reliable and uninterrupted provision of electricity. The RBL modality is appropriate, given (i) ADB's long-term assistance to PLN in financing generation, transmission, and distribution; (ii) its capacity for implementation; (iii) the alignment of the RBL with the national planning frameworks_RPJMN and RUPTL; (iv) PLN and the government's strong ownership of the 35 GW program; (v) the government's shift to direct lending to state-owned enterprises backed by a government guarantee, in order to increase efficiency and simplify the project approval process; (vi) lower transaction costs associated with program implementation; and (vii) the potential to stimulate cofinancing and donor harmonization with other development partners. The program will be included in the draft country operations business plan 2015_2017 and complements the proposed Sustainable and Inclusive Energy Program Subprogram 1 policy-based loan which will promote a more inclusive and sustainable energy sector in Indonesia with targets for renewable energy and energy efficiency.</p>
Impact	The quality of life in Indonesian society enhanced by the sustainable use of electricity as a key driver of increased economic activity. Electricity Power Supply Business Plan (RUPTL), 2015-2024.

## Project Outcome

Description of Outcome	Adequacy and reliability of power supply are achieved for Sumatra
Progress Toward Outcome	Ongoing.
<b>Implementation Progress</b>	
Description of Project Outputs	Existing transmission system strengthened and expanded. Existing distribution system strengthened and expanded. Performance management and implementation improved.
Status of Implementation Progress (Outputs, Activities, and Issues)	Ongoing. Interim verification of disbursement-linked indicators (DLIs) for 2016 was completed in November 2016. Four (4) out of six (6) DLI targets were achieved as of 30 September 2016. Annual verification of 2016 DLIs ongoing and is expected to be completed in March 2017.
Geographical Location	

## Safeguard Categories

Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

## Summary of Environmental and Social Aspects

Environmental Aspects	Potential construction-related impacts include disturbance of vegetation, soil erosion, sedimentation, noise, dust, vibration, and generation of waste. Potential impacts during operation include trimming of trees within the right-of-way of transmission and distribution lines. The program impacts are site-specific, and can be mitigated and/or managed by PLN's current practices. Gap identified by the assessment include weak management of industrial waste, which is addressed in the Program Action Plan (PAP).
Involuntary Resettlement	The program's activities that relate to extension of substations, installation of reactors and capacitors, and expansion of switchgears will take place in the existing substations' premises owned and managed by PLN. They will not require any involuntary resettlement. Expansion of the distribution network (including installation of distribution transformers) will require (i) use of no more than 0.2 square meters of land for installation of concrete poles, and (ii) possible removal of nonland assets (primarily trees) for stringing of conductors. Gap identified by the assessment include procedures for negotiated settlements or voluntary donation, which is addressed in the PAP.
Indigenous Peoples	Although Sumatra is inhabited by a variety of ethnic groups, the program will not be in areas where indigenous peoples are present.

### Stakeholder Communication, Participation, and Consultation

During Project Design	The stakeholders will be consulted through meetings, interviews and surveys in order to increase awareness about the program and seek inputs to the program. Consultation with the poor, vulnerable and excluded groups will focus on issues associated with environment, involuntary resettlement, if any, and other social issues that may affect them.
During Project Implementation	

## Responsible Staff

Responsible ADB Officer	Kubo, Toru
Responsible ADB Department	Southeast Asia Department
Responsible ADB Division	Energy Division, SERD
Executing Agencies	<i>P.T. Perusahaan Listrik Negara Kepala Dinas Rencana Pendanaan Gd.Timah Lt.III,Jl. Gatot Subroto Kav.18 Jakarta Selatan, Indonesia</i>

## Timetable

Concept Clearance	30 Jun 2015
Fact Finding	19 Aug 2015 to 21 Aug 2015
MRM	18 Sep 2015
Approval	02 Dec 2015
Last Review Mission	-
Last PDS Update	27 Mar 2017

## Loan 3339-INO

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
02 Dec 2015	04 Dec 2015	01 Feb 2016	30 Jun 2020	-	-

Financing Plan		Loan Utilization			
Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage	

Project Cost	575.00	Cumulative Contract Awards			
ADB	575.00	02 Dec 2015	230.00	0.00	40%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	0.00	02 Dec 2015	230.00	0.00	40%

## Loan 8297-INO

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
02 Dec 2015	04 Dec 2015	01 Feb 2016	30 Jun 2020	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	25.00	Cumulative Contract Awards			
ADB	0.00	02 Dec 2015	0.00	10.00	40%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	25.00	02 Dec 2015	0.00	10.00	40%

Project Page	<a href="https://www.adb.org/projects/49080-001/main">https://www.adb.org/projects/49080-001/main</a>
Request for Information	<a href="http://www.adb.org/forms/request-information-form?subject=49080-001">http://www.adb.org/forms/request-information-form?subject=49080-001</a>
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