



# Indonesia: Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program

Project Name	Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program								
Project Number	50016-001								
Country / Economy	Indonesia								
Project Status	Closed								
Project Type / Modality of Assistance	Loan								
Source of Funding / Amount	<table><tr><td colspan="2">Loan 3560-INO: Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program</td></tr><tr><td>Ordinary capital resources</td><td>US\$ 600.00 million</td></tr><tr><td colspan="2">Loan: Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program</td></tr><tr><td>KfW Bankengruppe</td><td>US\$ 310.00 million</td></tr></table>	Loan 3560-INO: Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program		Ordinary capital resources	US\$ 600.00 million	Loan: Sustainable Energy Access in Eastern Indonesia-Electricity Grid Development Program		KfW Bankengruppe	US\$ 310.00 million
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Strategic Agendas	Environmentally sustainable growth Inclusive economic growth								
Drivers of Change	Governance and capacity development Knowledge solutions Private sector development								
Sector / Subsector	Energy / Electricity transmission and distribution								
Gender	No gender elements								
Description	<p>The proposed \$600 million result-based loan (RBL) program aims to support the development of electricity distribution networks to connect businesses and households and to enhance the quality of life in Eastern Indonesia by the sustainable use of electricity as a key driver of increased economic activity. The program will complement a proposed sector loan for small- to mid-sized natural gas-fired power stations to deliver more sustainable energy services to communities across Eastern Indonesia. Natural gas is a much cleaner fuel compared to diesel and the quick-responding nature of gas-fired engines and turbines make them a good match for intermittent renewable energy sources such as solar and wind. It is an appropriate transition fuel to move towards a low-carbon energy system. The two loans will help enhance access to sustainable energy services and contribute to climate change mitigation.</p> <p>The overall investment needs for the government's generation, transmission, and distribution program are \$83.5 billion of which \$43.5 billion is to come from the private sector (independent power producers) and the balance of \$40 billion from the State Electricity Corporation (Perusahaan Listrik Negara or PLN). The government and PLN will not be able to meet the investment needs on their own. PLN has an estimated funding gap of \$30.3 billion which will have to be borne by other financing sources including from development partners. In Eastern Indonesia where there are many isolated grids, PLN is already using its own resources to establish 70 kilovolt (kV) and 150 kV backbone transmission systems while seeking support from ADB and other partners to strengthen and expand local distribution networks.</p> <p>A results-based lending modality will be used for this proposed operation. This will finance a slice of the overall broader program needs as identified in PLN's Electric Power Supply Business Plan (Rencana Usaha Penyediaan Tenaga Listrik or RUPTL) 2015-2024 for grid development in Eastern Indonesia. 8.A results-based lending modality will be used for this proposed operation for strengthening and developing the electricity distribution network, which involves many small-scale activities and expenditures. This will finance a slice of the overall broader program needs as identified in PLN's RUPTL, 2016-2025 for grid development in Eastern Indonesia. The RBL is a suitable modality for the program as: (i) it allows PLN to use its own program systems, thus providing a platform for institutional strengthening; (ii) it focuses attention on results rather than expenditures, leading to a stronger evaluation culture and in line with the government's intent to move towards performance-based regulation; (iii) it is well-aligned to a broader nationwide PLN program and is, therefore, able to scale up innovations from the RBL program; (iv) it has lower transaction costs associated with program implementation; and (v) it could stimulate cofinancing and donor harmonization with other development partners through a focus on common results. This operation is part of an overall programmatic approach and is embedded within a policy reform framework that is supported by the Sustainable and Inclusive Energy Program policy-based loan and complements the ongoing RBL for grid strengthening in Sumatra. This RBL is included in the Country Operations Business Plan, 2015-2017 and is integral to the Country Partnership Strategy's goal of closing the energy divide between Western and Eastern Indonesia.</p>								
Project Rationale and Linkage to Country/Regional Strategy	<p>The Indonesian economy is at a major crossroads. Economic growth has decelerated from its peak of 6.4% in 2010 to 4.8% in 2015 mainly due to the drop in commodity prices. Eastern Indonesia has an enormous potential to spur new sources of inclusive growth, in sectors such as fisheries, agro-industry and tourism, but this potential is held back by a lack of key infrastructure including electricity, ports, roads, and communications. Uneven development across provinces has also contributed towards widening regional income disparities with several provinces in Eastern Indonesia significantly lagging behind Java and Bali. To address this, the government has made it a priority to significantly boost and accelerate investment in infrastructure under the current National Medium-Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional, or RPJMN), 2015-2019 with 'outer and Eastern regions explicitly included as geographical priorities.</p> <p>One of the pillars of the government's infrastructure investment plan is to significantly improve access to electricity services, including a nation-wide target of adding 35 gigawatts of new power generation capacity and expand power grids to raise the electrification ratio to 97% by the end of 2019 from a baseline of 84% in 2014. The biggest challenge in meeting these targets is in Eastern Indonesia where power grids across the islands are isolated, of poor quality and underdeveloped. The electrification ratios in some eastern provinces are particularly low West Sulawesi 74%, Southeast Sulawesi 67%, West Nusa Tenggara (Nusa Tenggara Barat, or NTB) 68%, East Nusa Tenggara (Nusa Tenggara Timur, or NTT) 59%, and Papua 44%.</p>								
Impact	Quality of life in Indonesian society enhanced by sustainable use of electricity as a key driver of increased economic activity								
<b>Project Outcome</b>									
Description of Outcome	Access to more reliable electricity services for residential, commercial, and industrial customers in the Eastern Indonesian provinces in Sulawesi and Nusa Tenggara expanded								

Progress Toward Outcome	All outcome indicators have been achieved as follows: (i) 7.15 million costumers against 2020 target of 6.99 million customers in the 2019 annual verification. As of 30 June 2022, the total number customers was 8.36 million; (ii) 14,482.80 GWh against 2020 target of 13,964 GWh in the 2020 annual verification. As of 31 Dec 2021, total electricity sales was 15,570.37GWh. This DLI 2 is only for annual assessment; (iii) 2,621.83 GWh in 2021 annual, lower than 2019 target of 2,704 GWh and lower than the last 2019 achievement of 2,675 GWh, which was already disbursed to PLN. This was due to Lombok earthquake, Palu tsunami and earthquake and Manado's flood disaster in 2018 that affected commercial sales in 2019. This DLI 2a is only for annual assessment; (iv)10.17/100 ckm below 2020 threshold of 15.82/100 ckm permanent interruption in the 2020 annual verification. As of 31 Dec 2021, 8.70/100 ckm permanent interruption. This DLI 3 is only for annual assessment.	
Implementation Progress		
Description of Project Outputs	Distribution system strengthened and expanded Innovation and institutional capacity enhanced	
Status of Implementation Progress (Outputs, Activities, and Issues)	Output 1 (i) The number of distribution transformer units installed increased was achieved with 51,390 units against 2020 target of 50,721 units in the 2019 interim verification. As of 30 June 2022, there was 58,508 units of distribution transformers installed; (ii) The additional length of medium-voltage distribution lines installed was achieved late with 59,601.17 ckm against 2020 target of 58,764 ckm additional MV distribution line in 2021 annual verification. As of 30 June 2022, total MV distribution lines installed (excluding MV line passing the protected and biodiversity areas) was 60,377.85 ckm. (iii) The additional length of medium-voltage distribution lines installed, with an equal or higher growth rate in Lombok and Flores combined was achieved with 7,746.65 ckm against 2020 target of 7,388 ckm additional MV distribution line in Lombok and Flores in the 2020 annual verification. As of 30 June 2022, total additional MV distribution lines installed in Lombok and Flores (excluding MV line passing the protected and biodiversity areas) was 8,340.70 ckm. Output 2. (i) The new pilot-scale smart grid projects as of 30 June 2022 (a) 2020 target was achieved with at least 2 pilot SG projects operational in the 2021 annual verification, Sema COD was on 17 November 2020, and Selayar COD was on 23 December 2021, (b) 2021 target was achieved with additional 2 SG projects operational during 2021 annual verification, Medang COD was on 28 June 2022, and Sangihe COD was on 30 June 2022. (ii) The Operational efficiency and resource optimization enhanced and the use of digital prepaid meters or smart meters was achieved with 69.30% in Q2 2022, lower than 2020 target (70%) and 2021 target (75%) of total customers use digital pre-paid meters or smart meters. (iii) The Asset and waste management as of 30 June 2022: PLN has achieved 2017 (i) target on 2016 inventory of used equipment for disposal approved by PLN and achieved 2017 (ii) target on issuance of asset management guidance in February 2021. PLN achieved 2018 (i) the same 2016 inventory approved by MSOE, and 2018 (iii), 2019 (ii), 2020 and 2021 targets with 93% of PLNs used equipment in the 2016 inventory safely disposed against target of 90% by 2021. PLN partially achieved 2018 (ii) target on clean-up of the existing oil spills according to Government Regulation no. 101/2014 for 7 out of 15 locations and partially achieved 2019 (i) target of oil containment or protection measures for 24 out of 25 warehouses.	
Geographical Location	Central Sulawesi, East Nusa Tenggara, Gorontalo, North Sulawesi, South Sulawesi, Southeast Sulawesi, Sulawesi, West Nusa Tenggara, West Sulawesi	
Safeguard Categories		
Environment		B
Involuntary Resettlement		B
Indigenous Peoples		B
Summary of Environmental and Social Aspects		
Environmental Aspects	The program results area with potential environmental impact is expansion and reinforcement of the low voltage distribution network. The program is categorized B for environment because the potential adverse environmental impacts are site-specific (confined within the sites subject to physical works), mainly occurring during the construction period, few (if any) of them are irreversible, and in most cases, mitigation measures can be readily designed.	
Involuntary Resettlement	The expansion of the distribution network usually involves (i) the installation of concrete poles using no more than 0.2 m2 of land and (ii) the stringing of conductors possibly requiring the cutting/trimming of trees. Impacts of involuntary resettlement will be identified during program implementation.	
Indigenous Peoples	The islands of Sulawesi and Nusa Tenggara are inhabited by a variety of ethnic groups with diverse languages, however they consist only a small proportion of the total population and the program's activities are not expected to have significant impacts on indigenous peoples. While the general areas are known, the specific sites for expansion activities of the distribution network are determined on a rolling basis during program implementation. The program will not specifically target activities in areas (land or territory) occupied, owned, or used by indigenous peoples, and/or claimed as ancestral domain.	
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	Interim and Annual verification and review missions ensure discussions with all stakeholders including project beneficiaries.	
Responsible ADB Officer	Palupi, Ira	
Responsible ADB Department	Southeast Asia Department	
Responsible ADB Division	Indonesia Resident Mission (IRM)	
Executing Agencies	P.T. Perusahaan Listrik Negara	
Timetable		
Concept Clearance	21 Jun 2016	
Fact Finding	25 Jul 2016 to 04 Aug 2016	
MRM	20 Sep 2016	
Approval	14 Sep 2017	
Last Review Mission	-	
Last PDS Update	31 Oct 2022	

# Loan 3560-INO

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
14 Sep 2017	10 Oct 2017	14 Dec 2017	30 Jun 2022	-	07 Aug 2023

Financing Plan			Loan Utilization			
	Total (Amount in US\$ million)		Date	ADB	Others	Net Percentage
Project Cost	1,830.00		Cumulative Contract Awards			
ADB	600.00		04 Oct 2023	583.74	0.00	100%
Counterpart	1,230.00		Cumulative Disbursements			
Cofinancing	0.00		04 Oct 2023	583.74	0.00	100%

Status of Covenants						
Category	Sector	Safeguards	Social	Financial	Economic	Others
Rating	-	Satisfactory	Satisfactory	Satisfactory	-	Satisfactory

Project Page	<a href="https://www.adb.org/projects/50016-001/main">https://www.adb.org/projects/50016-001/main</a>
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Date Generated	04 March 2024

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