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Indonesia: West Kalimantan Power Grid Strengthening Project

Project Name

West Kalimantan Power Grid Strengthening Project

Project Number

41074-013

Country / Economy

- Indonesia

Project Status

Closed

Project Type / Modality of Assistance

- Grant
- Loan

Source of Funding / Amount

Grant 0354-INO: West Kalimantan Power Grid Strengthening Project

| Source | Amount |
|---|-------------------|
| Clean Energy Fund under the Clean Energy Financing Partnership Facility | US\$ 2.00 million |

Loan 3015-INO: West Kalimantan Power Grid Strengthening Project

| Source | Amount |
|----------------------------|--------------------|
| Ordinary capital resources | US\$ 49.50 million |

Loan 8272-INO: West Kalimantan Power Grid Strengthening Project

| Source | Amount |
|-----------------------------------|--------------------|
| Agence Francaise de Developpement | US\$ 49.50 million |

Strategic Agendas

- Environmentally sustainable growth
- Inclusive economic growth
- Regional integration

Drivers of Change

- Governance and capacity development
- Partnerships

Sector / Subsector

- **Energy** / Electricity transmission and distribution

Gender

No gender elements

Description

The proposed project is perfectly aligned with ADB's Energy Sector Assessment Strategy and Roadmap, which supports investment in strategic transmission assets that connects regions or countries across seas or international boundaries to optimize power networks by reducing the overall need for reserve capacity, improving system reliability, removing transmission bottlenecks, and transmitting cheaper power from one area to the other, addressing overall regional socio-economic and environmental improvement.

Project Rationale and Linkage to Country/Regional Strategy

In West Kalimantan, Sumatera and the other outer islands of Indonesia, most of the power generation is either oil or diesel based, and, as a result, cost of power generation is more than 25 cents/kWh. Large numbers of customers also do not have access to grid connected power supply in those areas, and the power grid will need strengthening to accommodate new customer connection. In addition to strengthened network, supply to new customers will need new generation capacity, especially low cost power generation to reduce the overall cost of power generation. The proposed project will address all these issues in West Kalimantan.

PLN, the state owned power utility in Indonesia, plans to reduce its cost of power generation in West Kalimantan by importing hydropower generated electricity from neighboring Sarawak, Malaysia by building about 83 km 275 kV transmission line from its Bengkayang substation to the border with Sarawak, Malaysia. On the other side of the border, in Sarawak, PLN's counterpart, SESCO, the state owned power utility in Sarawak will build about 42 km 275 kV transmission line from Mambong substation to the border with West Kalimantan. Together, these transmission lines in the two countries will form the first regional BIMP-EAGA flagship project and the first leg of the Trans Borneo Power Grid that aims to connect West Kalimantan across Sarawak, and Brunei, to Sabah (Malaysia) enabling power trading between the BIMP-EAGA countries.

PLN's investment in West Kalimantan is part of its nationwide plan to connect about 10 million new customers between 2011 and 2015 to support Government's commitment to 90% electrification by 2020 from about 62% in 2009. This national plan will need large investments and PLN will have to increase its operational income for it. Currently, PLN's income from its operation is insufficient to cover its cost of operation as the tariffs have been set low by the Government (average of 6.9 cents/kWh) for social reasons. As the cost of generation is much higher than the average tariff, PLN's operations are subsidized by the Government through a public service obligation (PSO) program that is approved by the Parliament each year. For 2011 PLN subsidy, the Government has allocated about \$7.3 billion from the 2010 level of \$6.46 billion (\$82 million for West Kalimantan). PLN's cost reduction will reduce the need for larger subsidy by PLN.

The proposed strengthening of the 150 kV distribution network, and PLN's import of cheaper power will also avoid emissions of about 400,000 tons of CO₂ that would have been generated by the old rental oil fired that PLN currently uses in West Kalimantan.

This is a priority project for strengthening distribution network in rural areas and for regional cooperation. It is consistent with ADB's country strategy and program for

2006-2009 and country operations business plan 2009-2011 that support the Government's economic growth target rate of 6.3%-6.8% per annum in 2010-2014 to reach at least 7% by 2014. They highlight the importance of removing infrastructure bottlenecks and promoting regional cooperation.

Impact

Sustainable power supply in West Kalimantan

Project Outcome

Description of Outcome

Cost of operating West Kalimantan power system reduced

Progress Toward Outcome

Packages 6 and 7 were awarded in August 2017. Package 5 contract was awarded in December 2017. Second loan extension from 30 June 2018 to 30 November 2019 is approved to complete construction of Packages 5, 6, and 7. Loan reallocation was approved on 10 Sept 2019. Land acquisition is completed. As of April 2022, construction progress of P5, P6, and P7 is 98.42%, 100%, and 91.95% respectively and expected to be completed by September 2022. PLN will ensure completion of the remaining contract activities beyond loan closing date on 30 Nov 2019 up to project completion and is financing the remaining contract amount.

Implementation Progress

Description of Project Outputs

Construction of Sarawak-West Kalimantan interconnection network

Construction of new transmission network in West Kalimantan (Bengkayang-Ngabang-Tayan)

New connections to households in West Kalimantan

Construction of new transmission network in West Kalimantan (Tayan-Sanggau-Sekadau)

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

Construction of P5 (substations) as of April 2022 = 98.42%. Tayan SS 9.89%, Sanggau SS 48.28%, Sekadau SS 40.24%. Physical completion for Tayan SS was completed, CC was issued on 20 April 2021. Target for Sanggau and Sekadau SS:- physical completion by 15 August 2022 - point to point test by 15 July 2022 (Sanggau and Sekadau SS through P7). Construction of P6 (Tayan-Sanggau TL) as of April 2022= 100%. Commissioning was completed in October 2020. CC was issued on 27 October 2020. Construction of P7 (Sanggau-Sekadau TL) as of April 2022 = 91.95%. Target for commissioning by July 2022. Physical completion target by September 2022. Bengkayang substation is fully constructed and energized. 150/20kV Bengkayang SS financed by PLN completed in May 2016. 81.375 km of 275kV TL

double circuit transmission line from Sarawak border to Bengkayang is now fully constructed. First and second circuits were energized on 20 January 2016 and 19 May 2016 respectively. 150/20 kV substation in Ngabang and four-line feeder extension in 150 kV Tayan substation and Bengkayang substation fully energized in November 2017. 144.65 km of 150 kV double-circuit transmission line between Bengkayang-Ngabang-Tayan fully energized in June 2018. As of April 2022, 1,896 households connected to ADB 52.973 km medium voltage (MV) and 46.760 km low voltage (LV) lines which contributed to total 27,815 households connected to ADB financed high-voltage (HV) lines in the targeted regencies under the grant against target of 8,000 new households connected to electricity network.

Geographical Location

Bengkayang, Kabupaten Bengkayang, Kabupaten Landak, Kabupaten Sanggau, Kabupaten Sekadau, Ngabang, Tayan, West Kalimantan

Safeguard Categories

Environment

B

Involuntary Resettlement

B

Indigenous Peoples

B

Summary of Environmental and Social Aspects

Environmental Aspects

This is classified as a Category B project for environment. The project poses no significant environmental risks. The draft IEE prepared shows the proposed 275 kV transmission line: (i) passing through flat to hilly country, with scattered villages and associated small farms and gardens mainly along the roads including shifting cultivation and re-growth; (ii) does not pass through any protected areas, areas with rare or endangered species, or areas of high ecological diversity; (iii) requires 9.04ha land in West Kalimantan area for tower sites; and (iv) requires tall trees to be cleared on land of 30m width, from the centre line, in West Kalimantan. In the project area, the vegetation is already highly modified by human activity through shifting and permanent cultivation. The area involves no protected areas, no primary forest, no cultural heritage sites, 30% of land occupied by crops and grassland, 68% is high canopy vegetation such as plantations and forest, and only 2% other land use. Update Initial Environmental Examination (IEE) has been approved for the 150 kV section from Tayan-Sanggau and Sanggau-Sekadau.

Involuntary Resettlement

- Resettlement and Customary Communities Plan (RCCP) for 275 kV section of Jagoibabang-Bengkayang and 150 kV section of Bengkayang-Ngabang-Tayan were approved by ADB in September 2016. The summary of RCCP in the form of leaflets has been posted on all affected village office boards. - Additional RCCP has been approved for the 150 kV section from Tayan-Sanggau and Sanggau-Sekadau. The updated RCCP has been approved by ADB on 29 January 2019 and disclosed on ADB's website and to the APs and stakeholders in the form of leaflet in May 2019.

Indigenous Peoples

The ethnic minority plans are incorporated in the RCCPs.

Stakeholder Communication, Participation, and Consultation

During Project Design

Stakeholders meetings were conducted in West Kalimantan; near the border area in Bengkayang and in other areas along the proposed route of the transmission line.

During Project Implementation

PLN and ADB confirmed that social internal monitoring are conducted semi-annually, and external monitoring has been conducted twice (three months after compensation payment for 50% of towers, and once 30% of ROW compensation has been provided, for 275 kV TL and 150 kV TL each), according to the updated RCCP for 275 kV and draft RCCP for 150 kV. All the monitoring reports have been submitted to ADB for web posting. During construction, PLN is required to submit the progress of EMP implementation and monitoring twice a year which to be uploaded on ADB website.

Business Opportunities

Consulting Services

The PIC is already contracted and mobilized: a Joint Venture of Tractebel Engineering GDF Suez (TE) (Thailand) and Powergrid International Limited (Thailand) in subconsultancy with PT Caturbina Guna Persada (Indonesia).

Procurement

Four ICB packages have been bid out in August 2012 and were awarded in 2013:

Package 1: Design, Supply, Installation, Testing and Commissioning of 275kV Overhead Transmission Lines Bengkayang Substation - Jagoibabang

Package 2: Design, Supply, Installation, Testing and Commissioning of 275/150kV Bengkayang Substation

Package 3: Design, Supply, Installation, Testing and Commissioning of 150kV Transmission Lines Bengkayang - Ngabang - Tayan

Package 4: Design, Supply, Installation, Testing and Commissioning of 150/20kV Substation at Ngabang and Tayan;

Grant component: Connection to Households in West Kalimantan through Extension of MV and LV Network

Contact

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

28 Aug 2010

Fact Finding

14 Feb 2011 to 17 Feb 2011

MRM

09 Aug 2011

Approval

27 Aug 2013

Last Review Mission

-

Last PDS Update

13 Apr 2022

Funding

Grant 0354-INO

Milestones

| Approval | Signing Date | Effectivity Date | Closing | | |
|-------------|--------------|------------------|-------------|-------------|-------------|
| | | | Original | Revised | Actual |
| 27 Aug 2013 | 20 Oct 2013 | 04 Apr 2014 | 31 Jul 2016 | 31 Jul 2017 | 18 Dec 2017 |

Financing Plan

| Total (Amount in US\$ million) | |
|---------------------------------------|------|
| Project Cost | 2.00 |
| ADB | 0.00 |
| Counterpart | 0.00 |
| Cofinancing | 2.00 |

Grant Utilization

| | Date | ADB | Others | Net Percentage |
|----------------------------|-------------|------|--------|----------------|
| Cumulative Contract Awards | 10 Jul 2024 | 0.00 | 1.66 | 83% |
| Cumulative Disbursements | 10 Jul 2024 | 0.00 | 1.66 | 83% |

Status of Covenants

| Category | Sector | Safeguards | Social | Financial | Economic | Others |
|----------|--------------|--------------|--------|--------------|----------|--------------|
| Rating | Satisfactory | Satisfactory | - | Satisfactory | - | Satisfactory |

Loan 3015-INO

Milestones

| Approval | Signing Date | Effectivity Date | Closing | | |
|-------------|--------------|------------------|-------------|-------------|-------------|
| | | | Original | Revised | Actual |
| 27 Aug 2013 | 17 Oct 2013 | 04 Apr 2014 | 31 Jul 2016 | 30 Nov 2019 | 10 Sep 2020 |

Financing Plan

Total (Amount in US\$ million)

| | |
|--------------|-------|
| Project Cost | 78.50 |
| ADB | 49.50 |
| Counterpart | 29.00 |
| Cofinancing | 0.00 |

Loan Utilization

| | Date | ADB | Others | Net Percentage |
|----------------------------|-------------|-------|--------|----------------|
| Cumulative Contract Awards | 10 Jul 2024 | 48.76 | 0.00 | 100% |
| Cumulative Disbursements | 10 Jul 2024 | 48.76 | 0.00 | 100% |

Status of Covenants

| Category | Sector | Safeguards | Social | Financial | Economic | Others |
|----------|--------------|--------------|--------|--------------|----------|--------------|
| Rating | Satisfactory | Satisfactory | - | Satisfactory | - | Satisfactory |

Loan 8272-INO

Milestones

| Approval | Signing Date | Effectivity Date | Closing | | |
|-------------|--------------|------------------|-------------|-------------|-------------|
| | | | Original | Revised | Actual |
| 16 Nov 2011 | 08 Feb 2013 | 08 Feb 2013 | 31 Jul 2016 | 30 Jun 2018 | 09 Aug 2018 |

Financing Plan

Total (Amount in US\$ million)

| | |
|--------------|-------|
| Project Cost | 49.50 |
| ADB | 0.00 |
| Counterpart | 0.00 |
| Cofinancing | 49.50 |

Loan Utilization

| | Date | ADB | Others | Net Percentage |
|----------------------------|-------------|------|--------|----------------|
| Cumulative Contract Awards | 10 Jul 2024 | 0.00 | 38.76 | 100% |
| Cumulative Disbursements | 10 Jul 2024 | 0.00 | 0.00 | 0% |

Project Page <https://www.adb.org/projects/41074-013/main>

Request for Information <http://www.adb.org/forms/request-information-form?subject=41074-013>

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