

JAPAN FUND FOR POVERTY REDUCTION GRANT

I. INTRODUCTION

1. The proposed grant will support the the State Electricity Corporation (Perusahaan Listrik Negara, PLN) to execute a sustainable and equitable rural electrification program in Kalimantan Maluku, and Papua. The grant will support the program to: (i) improve access to electricity for some of the poorest and most isolated people in Indonesia; (ii) improve consumers' understanding of safe and productive energy use; and (iii) evaluate the social and gender impacts of the program to inform future designs. The grant, financed by the Japan Fund for Poverty Reduction (JFPR),¹ will leverage its impacts across the \$600 million (OCR) results-based lending (RBL) program as the grant's outputs are reflected in the RBL's disbursement linked indicators (DLIs). The proposed grant program builds on lessons from previous RBLs for electrification in Eastern Indonesia,² and addresses priority areas in ADB's country partnership strategy for Indonesia, 2016–2019, which include improving infrastructure, boosting rural productivity, and addressing inequality.³

2. The grant supports a portion of the program's results, as measured by DLIs. It directly supports achievement of the target regarding the number of additional poor households provided with PLN electricity, as well as the specific sub-target for households headed by women (DLI 2). It supports consumer education participatory workshops regarding safe and productive electricity use, with at least 30% female participation (DLI 7), as well as the design and monitoring framework (DMF) indicator for the improvement of time use, especially for women. Without the DLIs and the grant, PLN is not required to provide connections for poor households, improve consumer's comprehension of safe and productive energy use, or evaluate social outcomes. Thus, while the grant is anticipated to focus in the areas of greatest poverty in Papua and Maluku, the impacts are anticipated to benefit more than 890,000 households to be connected under the program.

II. THE GRANT

A. Rationale

3. **Inequality.** Indonesian communities continue to be held back by significant socio-economic disparities. Eastern Indonesia is far less developed than the country's western regions. Indonesia's poverty rate has declined from 19% in 2000 to 10% in 2017; however, regional disparities are stark, with poverty rates of 28% in Papua, 23% in West Papua, and 18% in Maluku. Eastern Indonesia has potential for growth in sectors such as fisheries, agro-industry, and tourism but is held back by inadequate electricity, port, road, and communications infrastructure. The government has made investment in infrastructure a priority, particularly in its eastern regions, under its National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional*),⁴ and has a target of 100% electrification;⁵ however, Papua and Maluku's mountainous and island geography, coupled with a disproportionate share of poverty, present significant challenges for electrification, where investments may take years to be recovered.

¹ JFPR is a possible funding source subject to the approval of the Government of Japan.

² "Eastern Indonesia" covers provinces in Kalimantan, Nusa Tenggara, Maluku, Papua, and Sulawesi. ADB's previous RBL program for electricity grid development covered Sulawesi and Nusa Tenggara (ADB. 2017. *Sustainable Energy Access in Eastern Indonesia—Electricity Grid Development Program*. Loan 3560-INO, \$600 million).

³ ADB. 2016. *Indonesia: Country Partnership Strategy (2016–2019)*. Manila.

⁴ Government of Indonesia. 2015. National Medium-Term Development Plan, 2015–2019. Jakarta.

⁵ Ministry of Energy and Mineral Resources. 2017. *National Energy Master Plan*. Jakarta; and PLN. 2017. *Electric Power Supply Business Plan, 2018–2027*. Jakarta.

4. **Poverty and electrification.** Communities living in Eastern Indonesia have little or no access to clean energy, limited social services, and poor outcomes in education, health, and gender equality. Papua, West Papua and Maluku are among the poorest provinces in Indonesia, where consumption spending among the poor is on average \$43 per person per month. Electrification rates lag—households not electrified or poorly electrified account for 58% of households in Papua, and 22% in West Papua, 14% in Maluku, and 16% in North Maluku.⁶ Within the provinces, inequality is exacerbated by urban–rural divides. In Papua, 59% of the 29 districts lack electricity for up to half of their households, and in many—such as Mamberamo Tengah, Puncak, and Nduga—there is essentially no electricity access. This contrasts with the city of Jayapura, which has reached 100% electrification. Where PLN electricity is not available, people depend on expensive, intermittent, and often unhealthy sources of energy, such as kerosene lamps, lead-acid batteries, and communal diesel generators.

5. **Livelihoods, health, and education.** Most poor communities live well below the poverty line on a subsistence basis, with incomes of about Rp300,000 to Rp2 million (\$21–\$142) per month per household.⁷ The income of poor households is spent primarily on food, followed by children’s education, which is constrained in the absence of electricity for lights and telecommunication. Health outcomes are generally poor, and many villages have no resident midwife. Without electricity, villages cannot keep vaccines or drugs that rely on refrigeration.

6. **Gender.** The region’s gender inequality is daunting. Papua and West Papua have the lowest Gender Development Index (GDI) scores in Indonesia and gender empowerment measures are low across Eastern Indonesia.⁸ Awareness and acceptance of households headed by women is generally low and varies by community. About 25% of households are headed by women in practice,⁹ but tracking in the National Team for Acceleration of Poverty Reduction (TNP2K) database is constrained by cultural practice and a marriage law,¹⁰ which specifies men as household heads. This lack of recognition leads to discrimination in social and political life. Challenges are compounded by poverty as households headed by women represent about 49% of families in the lowest welfare level (footnote 8). The TNP2K database records 8,388 poor households headed by women (11% of total poor households) in West Papua Province, 22,351 (5%) in Papua Province, 16,666 (12%) in Maluku and 6,370 (12%) in North Maluku.

7. **Electrification and equality.** Increased electrification has been shown to improve development outcomes. A longitudinal study in Viet Nam found impacts to include: increased income, higher school attendance rates, time savings and improved time use by women for productive and educational activities.¹¹ In Bhutan, a study showed the impacts include: improved school completion rates; increased incomes; reduced respiratory illnesses; time savings,

⁶ Government of Indonesia. 2018. *Statistical Yearbook of Indonesia*. Jakarta. “Poorly electrified” is defined as non-PLN sources, which are typically expensive and intermittent, such as generators or poorly maintained solar photovoltaic plants.

⁷ Data collected during the ADB Mission to Papua and Maluku in October, 2018. The most common livelihoods are fisheries, agriculture, and trading.

⁸ GDI measures life expectancies, expected and mean years of schooling, and income per capita. Gender empowerment measures women in specific employment sectors. Ministry of Women’s Empowerment & Child Protection and Indonesian Central Statistical Office (BPS). 2018. *Pembangunan Manusia Berbasis Gender 2018*. Jakarta.

⁹ Government of Indonesia. 2014. *Community-based Welfare Monitoring System Survey (SPKBK)*. Jakarta.

¹⁰ Marriage Law No. 1/1974

¹¹ S. Khandker et al. 2008. *Welfare Impacts of Rural Electrification: Evidence from Vietnam*. World Bank, Washington DC.

especially for women; and a more significant role for women in household decisions.¹² To realize electrification's potential, however, these studies indicate that consumer education on safe and productive energy use is necessary.

8. **Affordability for poor households** The main barriers for poor households in accessing electricity are the instability and insufficiency of their income.¹³ Because poor household structures are often constructed without internal electrical wiring, the initial connection and installation charges for electricity are inaccessibly high for many. For these homes, the total cost of household connection includes: the PLN metered connection, the in-house wiring, safety certification,¹⁴ and (typically) three lightbulbs. About 75%–85% of the total connection cost in Papua and Maluku goes to third party contractors.¹⁵ The total connection and installation charges for each household is typically Rp1.8–Rp2.2 million (\$130–\$160) for a 450 volt-ampere (VA) connection; this is typical for poor households, although third party providers may charge more, especially in remote areas where transportation costs are high and there are few qualified technicians. PLN has a uniform metered connection charge throughout Indonesia for each tariff class. In 2018, 450 VA connections were Rp421,000 (\$28), and 900 VA connections cost Rp865,000 (\$57). Connecting poor households often represents a loss for a utility, exacerbating losses typically accrued in extending grids to rural communities. The total connection and installation charges (third party and PLN) exceed the willingness and ability to pay among most poor and near-poor communities.

9. In Papua and West Papua specifically, the total cost of connections averages Rp1.9 million–Rp2.2 million (\$134–\$160) for the 450 VA tariff category and more than Rp2.3 million (\$163) for 900 VA, inclusive of PLN connection charges. In Maluku and North Maluku, charges average Rp1.7million–Rp1.8 million (\$121–\$130) for the 450 VA connection, and Rp2 million–Rp3 million (\$142–214) for 900 VA.¹⁶ Once connected, however, monthly electricity tariffs are subsidized by the central government for poor households, and are largely affordable. The lowest income households typically consume 40 kWh per month, costing about Rp17,040 (\$1.19).¹⁷

10. **Government support.** Historically, central government energy subsidy targeting has been imprecise, and support for poor households' connections to electricity has been episodic.^{18, 19} Provincial and local governments may fund connections for households in targeted areas, and some communities chose to pool resources to fund connections for all households; however, these instances are exceptional.

¹² ADB. 2010. *Asian Development Bank's Assistance for Rural Electrification in Bhutan—Does Electrification Improve the Quality of Rural Life?* Manila.

¹³ Average household consumption for families at the poverty line is \$95 and \$168 per month per household. Food spending among the poorest families accounts for approximately 61% of household consumption.

¹⁴ *Sertifikat Layak Operasi* (certification of safety) is performed by a third-party contractor.

¹⁵ As a state-owned utility, PLN's responsibility is for connecting households to electrical distribution networks. PLN is not permitted to install or use operational funds for third-party installation of in-house wiring or safety certification. However, because there are limited trained electrical service providers and many homes lack safe electrical wiring, especially in remote areas, grant-style approaches for the full cost of connection have been undertaken periodically by the central government in strategic areas. Under such approaches, PLN implements the procurement using specifically earmarked funds.

¹⁶ Estimates are based on anecdotal evidence collected through interviews and focused-groups discussions during the October 2018 ADB and PLN Mission to Papua and Maluku.

¹⁷ ADB. 2016. *Achieving Universal Electricity Access in Indonesia*. Manila.

¹⁸ More than half of the households in Indonesia received subsidies in 2016, not all of which could be classified as poor or near-poor; however, national government funds have been used to connect poor households in priority areas, such as West Java in 2018.

¹⁹ Beritager. 2018. [The public can enjoy free electricity installation](#). Jakarta.

11. **Grant program.** The proposed grant will support access to electricity for poor households, consumer education on safe and productive energy use, and an investigation of the social and gender impacts of the program. The grant focuses on high-poverty areas in Papua and Maluku. The RBL program is the third in a series of five planned investments by PLN with ADB under the Sustainable Energy Access in Eastern Indonesia program, and thus builds on strong experience and lessons, including the efficiency and effectivity gains available through the RBL modality. RBLs establish results targets for disbursement of proceeds, thus decoupling the costs of interventions from the development outcomes. This makes financing multiple small transactions such as household connections more efficient than traditional input-based financing. Grant proceeds are not linked to specific expenditure items but are an integral part of the overall financing plan (Table 2).

12. **Access to reliable and sustainable electricity.** Access to electricity will be facilitated through the grant program in Maluku and Papua by dedicating grant funds that can be used to support the full-cost of connections, including in-house wiring, safety certification, metered connections, and lightbulbs.²⁰ This could not be accomplished through regular operations alone.

13. **Safe and productive energy use.** Communities that do not have electricity are unfamiliar with safety precautions and potential productive uses. There are tragic examples of people who receive electricity service for the first time and are electrocuted because of improper use, and these highlight the importance of basic consumer knowledge. The grant will support: (i) training to improve the capacity of PLN staff who deliver consumer socialization to address safety and productivity, and (ii) the development of materials for consumer education on safe and productive energy use. Socialization workshops offer superb platforms to improve consumer education, but the consistency and content of such workshops currently varies across PLN. Content primarily focuses on payment procedures. This will be enhanced with safety cautions and potential uses, such as lighting for evening work and homework, small-scale agricultural processing, or refrigeration to extend fisheries market access and health facilities, as relevant to each community.

14. **Impact assessment of rural electrification.** The impacts of rural electrification should justify the costs; to measure the impacts of the program on socioeconomic and gender outcomes, the grant will fund a baseline study and impact evaluation. This will enable PLN and the government to understand the full value proposition of rural electrification and to improve future designs. Regionally, it is predominantly the poor who remain without electricity. The assessments will comprise a baseline study before the program using household and community surveys and a final evaluation at the end of the program. The evaluation will establish to what extent PLN electrification impacted individuals, households, and communities, disaggregating the results by sex.

B. Outputs and Key Activities

15. The grant's *impact* is aligned with the RUPTL's goal of enhancing the quality of life in Indonesian society through the sustainable use of electricity. The outcome aims to enhance sustainable, equitable and reliable access to electricity. The RBL program's indicative targets and key activities are as follows.

²⁰ Household connection status and external government (local and national) programs to support household connections in targeted areas are anticipated to vary over time because 100% electrification is a national priority. Thus, the grant, using the RBL modality, is designed to be flexible to support either the full or a portion of the cost of connections, based on local conditions and needs.

16. **Output 1.** An additional 16,000 poor households provided with PLN electricity by 2024,²¹ supported by the grant, with results disaggregated by sex of household head,²² directly supporting DLI 2. This output is within PLN's core competencies and will include: planning batched procurement; cross-checking with PLN's database that include gender of household head from TNP2K; verifying data in the field, including via consumer consultations; procuring in-house wiring and SLO certification; and contracting PLN metered connections.

17. **Output 2.** An e-module will be developed, and two training sessions on conducting community workshops for safe and productive energy use will be held with participation by at least 58 PLN staff members, including female staff—specifically two staff members from each of the 29 local PLN Customer Service Implementation offices (UP3) and other relevant PLN staff responsible for socialization workshops, by 2021. Output 2 also includes culturally-sensitive (including in terms of language and literacy) materials for safe and productive energy use provided to each of the 29 UP3 offices for community education workshops, by 2021. Both components support DLI 7. Key actions will include staff and resource planning, potential recruitment of external technical support, module and e-module development, and material printing, including safety tips to be posted in homes.

18. **Output 3.** A baseline socioeconomic and gender assessment will be conducted in 2020. A follow-up socioeconomic and gender impact evaluation (with inputs from an expert working group, as well as searchable database) will be finalized with endorsement by PLN management by 2025,²³ supporting the measurement for the results framework output for improved time use, especially for women. The evaluation will consist of two study reports, one with a baseline study in 2020 and a final evaluation by 2025. The working group, convened by PLN's corporate planning division, will include ADB expertise and will review and clear key outputs, as further detailed in the Program Implementation Document (footnote 29).

C. Cost Estimates and Financing Plan

19. RBL supports the overall program and does not link disbursements to individual expenditures or transactions. It is not possible to determine the costs of achieving a specific result indicator, as results are achieved by using all program resources. Cost is considered, but there is no one-to-one relationship between disbursement allocation and the costs required to achieve results.²⁴ The program results that are supported by the JFPR cofinancing are estimated to cost \$26.0 million. Table 1 shows the estimated costs for the JFPR-financed program components.

²¹ The definition of "poor household" is used by the local government, as reported and updated in the central database of TNP2K, which PLN also uses for identifying households eligible for electricity tariff subsidies.

²² In principle these are the households receiving electricity tariff subsidies and other benefits from poverty reduction programs. These are identified from the databases of the Ministry of Social Affairs and its district offices, to which PLN is provided with access. Within the TNP2K database, approximately 19,371 households in Maluku and 74,227 households in Papua did not have access to PLN electricity in 2017.

²³ The baseline study will measure the situation of households (women, men and children) before electrification, while the impact evaluation will provide sound evidence of the changes that electrification has brought to these communities in terms of time use, education, and livelihood opportunities for household members.

²⁴ ADB. 2018. *Supplementary Staff Guidance for Piloting Results-Based Lending for Programs*. Manila.

Table 1: Cost Estimates

(\$ million)		
Item	Amount (million) ^a	Share of Total (%)
A. Base Cost^b		
1. Output 1: Household Connections	21.5	82.7
2. Output 2: PLN training and materials for community workshops	1.2	4.6
3. Output 3: Impact evaluation	0.7	2.7
Subtotal (A)	23.4	90
B. Contingencies^c	2.6	10
Total (A+B)	26.0	10

ADB = Asian Development Bank, PLN = Perusahaan Listrik Negara, RBL = results-based loan.

^a Includes taxes and duties to be financed from government, PLN, and/or ADB resources. Taxes are itemized in the total expenditure for the program.

^b Estimated costs are provided for indicative purposes per template requirements, noting that the RBL and associated documents use a program expenditure framework rather than cost tables. Estimates are provided in mid-2018 prices.

^c Maximum of 10% of the total cost.

Source: ADB

20. JFPR will provide grant cofinancing equivalent to \$3 million, to be administered by ADB. The financing plan is in Table 2. The executing agency, implementing agency, local governments, and nongovernment organizations will provide in-kind counterpart support in the form of office space, workshop venues, and staff.

21. Financing is not intended as direct payment for the costs of achieving the program results. Results are achieved by using all the resources for the RBL program.²⁵ The program's specific disbursement-linked indicators are found in Table A3.1 and the annual disbursement schedule in Table A3.3 of the report and recommendation of the President. Table 2 presents the indicative financing plan for the program results supported by the JFPR cofinancing.

Table 2: Financing Plan^a

Source	Amount (\$ million)	Share of Total (%)
Government ^a	21.8	83.9
PLN ^b	1.2	4.6
Japan Fund for Poverty Reduction ^c	3.0	11.5
Total	26.0	100.0

PLN = .Perusahaan Listrik Negara.

^a Includes central and local government financing

^b From PLN's internal cash flows and equity injections from the Government of Indonesia.

^c Administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

D. Implementation Arrangements

22. The executing agency and implementing agency for the loan and grant will be PLN, with ADB providing direct funds to PLN (Table 3). PLN's regional planning office for Maluku and Papua will be the focal unit for the household connections; it will be supported by (i) the Corporate Social Responsibility division; (ii) the PLN University,²⁶ which will provide training and materials development; and (iii) PLN's corporate planning division, which will convene a working group that includes PLN and ADB representatives across divisions for the socioeconomic impact

²⁵ ADB. 2018. *Supplementary Staff Guidance for Piloting Results-Based Lending for Programs*. Manila

²⁶ PLN University is PLN's staff training and development center.

evaluation. All implementation will have oversight by PLN headquarters in Jakarta.²⁷ Implementation arrangements are described in detail in the PID. Implementation timelines are aligned with the program, culminating in December 2025. Audit, reporting, and monitoring and evaluation details are aligned with the program and described in detail in the PID. Quarterly and annual reporting will include a separate chapter on grant achievements. The program will rely on PLN's systems and will exclude high-value contracts in accordance with ADB's RBL policy.²⁸

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	January 2020–December 2025		
Estimated completion date	June 2025		
Management			
(i) Oversight body	MOF		
(ii) Executing agency	PLN		
(iii) Key implementing agencies	PLN		
(iv) Implementation unit	PLN PR-MP, RKO, CSR		
Procurement (indicative)	PLN limited bidding ^a	4-8 contracts	\$ 1.6 million
	PLN direct procurement ^b	4-8 contracts	\$ 0.6 million
Consulting services (indicative)	PLN's quality and cost-based competitive selection ^c	29 person-months	\$ 700,000
Advance contracting (indicative)	Advanced contracting will be used to recruit a firm to initiate the socio-economic impact evaluation.		
Disbursement ^a	Grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time). Advance financing and financing for prior result will be made available within the RBL policy limits, as further described in the PID.		

ADB = Asian Development Bank, CSR = PLN corporate social responsibility division, MOF = Ministry of Finance, PID = program implementation document, PLN = Perusahaan Listrik Negara (State Electricity Corporation), PR-MP = PLN Maluku and Papua regional planning division, RBL = results-based loan, RKO = PLN corporate planning division.

Note: In accordance with ADB. 2018. *Staff Guidance for Piloting Results-Based Lending for Programs*. Manila, procurement and consultant recruitment will rely on PLN's system. The program procurement assessment, as summarized in the Program Fiduciary System Assessment (available from the list of linked documents in Appendix 2 of the report and recommendation of the President) found that the procurement framework expressed in PLN's board of directors Decree No. 0620.K/DIR/2013 on PLN (Persero) General Guidelines for Procurement is appropriate and follows good practices used by utility companies around the world.

^a Limited bidding limits the request for tenders to a select number of providers.

^b Direct procurement will be used to acquire resources (raw materials) for services provided by PLN.

^c This takes into account the quality of the proposal and the cost of the services.

Source: ADB estimates.

III. DUE DILIGENCE

A. Technical

23. A review of the technical soundness found a sound program with no major issues.²⁹ The outputs of the grant are simple and straightforward. PLN has experience in electricity connections, developing training programs and materials, and recruiting external expertise. The program is

²⁷ Key PLN divisions in headquarters have developed a good capacity to plan and manage RBL programs through ongoing RBL programs; ADB. 2015. [Electricity Grid Strengthening–Sumatra Program](#). Manila; ADB. 2017. [Sustainable Energy Access in Eastern Indonesia–Electricity Grid Development Program](#). Manila.

²⁸ ADB. 2013. *Piloting Results-Based Lending for Programs*. Manila.

²⁹ Relevant linked documents (available from Appendix 2 of the report and recommendation of the President) include: Program Soundness Assessment, Program Results Framework, Program Expenditure and Financing Assessment, Program Monitoring and Evaluation System Assessment, Program Fiduciary Systems Assessment, Program Safeguard Systems Assessment, Integrated Risk Assessment and Mitigating Measures, Program Action Plan, Development Coordination, Summary Poverty Reduction and Social Strategy, and the Program Implementation Document.

operationally viable and can be expected to increase access and equality of electricity services for poor and vulnerable households. The key innovation of the grant is the increased efficiency of cofinancing using the RBL modality, which establishes results targets for disbursement of proceeds to achieve a substantial number of small-scale activities, such as household connections, located across a large geographical area. This reduces transaction costs compared with traditional investment lending.

24. The program and grant represent the first integration of gender and social impact considerations into PLN's cooperation with ADB, including some of the most extensive gender-specific actions for any energy project at ADB or PLN. Women will benefit substantially, especially in marginalized communities via specific attention to and tracking of electricity access by households headed by women, explicit inclusion of women in community workshops and PLN training, and development of materials that address women-oriented risk vectors. These actions support achievement of the program's wider impacts, which will reduce the effort women must expend to obtain combustible fuels, and enable women to engage in income-generating activities in their own homes.

B. Economic and Other Impacts, Financial Viability, and Sustainability

25. **Economic and financial.** The program will generate incremental economic benefits from the electrification of additional households.³⁰ The program's economic viability was evaluated using a system approach for the entire PLN program in Kalimantan, Maluku, and Papua. This analysis determined the economic viability to be acceptable under ADB guidelines.³¹ The program will use PLN's existing fiduciary, procurement, and audit systems, which were assessed and deemed satisfactory to ADB. Program actions will address weaknesses identified in the assessment of these systems.

26. The grant will support the program outcome of equitable and reliable access to electricity with a focus on poor households. The largest grant component, connections for poor households, is well supported by in-situ conditions, and beneficiaries' use of pre-paid electricity meters is sufficiently supported through existing markets.

27. **Sustainability.** Benefits will continue to accrue over time for poor households receiving electricity connections.³² More than 890,000 new PLN residential customers will receive information on safe and productive electricity use; they will benefit directly and the impacts will be amplified via social networks. PLN University and the e-module components offer a sustainable structure for capacity development. The socioeconomic impact assessment is essential to sustainability, and will inform improvements to the government's continuing investments in support of achieving full electrification.

C. Governance

28. The program soundness assessment concluded that PLN could undertake the financial management of the program. ADB's *Guidelines to Prevent or Mitigate Fraud, Corruption, and Other Prohibited Activities in Results-Based Lending for Programs* were explained to and discussed with PLN.³³ The specific policy requirements and supplementary measures are

³⁰ Household electrification makes possible home enterprises, increased education, and improved health, among other benefits, which can contribute to increased household earnings.

³¹ ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

³² Increased ability to read and study in the evenings, improved indoor air quality through fuel lamp elimination, and improved communication via phones compounds benefits over time as people become more educated, experience improved health and earning potential, and increase their communication network access.

³³ ADB. 2013. *Staff Guidance for Piloting Results-Based Lending for Programs*. Manila. (Appendix 7).

described in the PID. The program is part of PLN's overarching expansion program, and will be implemented in accordance with PLN's legal framework, regulations and procedures designed to protect PLN from corruption risks.

D. Poverty and Social Impacts

29. The program targets the region's poorest and most vulnerable households. The core beneficiaries will be poor households who gain access to reliable electricity, and especially the households headed by women. In addition, over 890,000 new PLN residential customers in the program area will benefit from improved understanding of safe and productive energy uses. People in remote locations in Indonesia and neighboring island nations who still lack reliable electricity access will benefit from the unique socioeconomic impact study of rural electrification, which may serve as a justification for continued government support, and provide design lessons for further electrification programs. Overall, the program will help to reduce inequality in Indonesia.

30. Specifically, households will benefit from electric lighting and the use of appliances such as televisions, rice cookers, refrigerators, and hot water jugs. Children will be able to read and study in the evenings and their living environment will be healthier, with reduced use of kerosene lamps and diesel generators. Community centers, schools and health centers will benefit from electricity, which can provide extended evening hours, cold storage for essential drugs and vaccines, and sterilization of medical instruments; households may use small electric devices for home enterprises such as packaging and processing of food and non-timber forest products; and money households save from reduced fuel use can be used for food, education, or health.

E. Participatory Approach

31. Poor households and those headed by women, local leaders, government officials, universities, and third-party providers of household connections were consulted during ADB and PLN due diligence. Findings added to the knowledge of PLN's experienced staff in planning and operations and ADB's experience with previous RBLs with PLN to inform the program design. During implementation, beneficiaries of household connections will choose a service provider, communities will participate in workshops, and PLN staff will determine representatives for training sessions who will inform improvements for subsequent trainings via a batched training approach.

F. Development Coordination

32. There has been regular cooperation and harmonization of energy sector activities among development partners with regular invitations from each of the key development partners — including Agence Française de Développement, Japan International Cooperation Agency (JICA), German development cooperation through KfW, and the World Bank—to participate in meetings or missions and exchanges of information and documents. ADB also joined these key development partners in holding policy dialogues with the government on several occasions, which were well received. Ongoing RBL programs are cofinanced with the World Bank and KfW, and possible collaboration will be pursued for the proposed program with Agence Française de Développement (cofinancing with focus on clean energy), JICA (fisheries in Maluku and Papua), and the governments of Australia (program implementation support and results verification) and New Zealand (clean energy in Maluku).

33. The program discussed priorities with JICA and the Japanese Embassy in Jakarta; in 2018 JICA approved a complimentary grant program for the productive use of rural electricity in the

outer and eastern islands, providing a synergistic productive use for program outputs.³⁴ Due diligence lessons have been shared with New Zealand's program on the island of Seram in Maluku to support clean energy,³⁵ and ongoing cooperation is included in implementation.

G. Safeguards

34. The program is expected to generate significant positive environmental and social benefits. The Program Safeguard Systems Assessment (footnote 29) assessed the safeguards system of PLN, and confirmed the safeguards categorizations of B for environment, involuntary resettlement, and indigenous peoples. The program will enhance access of customary communities to village electrification and improve understanding of electricity benefits as well as safety precautions. The impact of household connections is primarily positive and typically requires: (i) installation of wires, boxes, lightbulbs, and related components inside houses; (ii) an externally-mounted prepaid meter; and (iii) an above-ground wire connection to the nearest distribution pole or electrified structure. Gaps in PLN's safeguard system are addressed in the program action plan (footnote 29), including a screening mechanism to ensure that the RBL program excludes activities that would be classified as category A. Capacity development focuses on safety and is driven through the training of PLN staff as well as improved consumer education materials.

H. Risks and Mitigating Measures

35. Risks and mitigating measures are summarized in Table 4. The overall benefits are expected to outweigh the risks, and no major risks were identified.

Table 4: Summary of Risks and Mitigating Measures

Risk	Description	Mitigating Measures
Program Scope	A significant proportion of poor households, including those headed by women, may be unable to connect mainly due to depth of poverty and remoteness.	PLN will use the grant to support in-house wiring costs for poor households. The loan and clean energy grant will support PLN to connect remote villages using small and/or mini grids with distributed renewable energy and hybrid systems.
Public health and safety	People are unfamiliar with safe practices with electricity and new customers are injured.	DLI 7 supports safe electrification by facilitating education workshops, and the grant supports instructive materials for consumer's in-home safety precautions.
Monitoring & Evaluation Systems	PLN does not yet have the means to monitor DLI 2, notably the connection of poor households and those headed by women. Information exists on poor households in the system but not on female heads of household. Both have to be integrated within PLN's regular information flow systems.	(i) PLN will need to establish a procedure between MoSA, MEMR and PLN to include data on households headed by women in MEMR's annual updates sent to PLN, (ii) PLN will add the data field for gender of household head in an interface module between the TNP2K database and PLN's application (AP2T). PLN should consider eventually integrating the reporting on DLI 2 into PLN systems, so that future PLN work will benefit from this institutional change.

AP2T = centralized customer services application (aplikasi pelayanan pelanggan terpusat) ; MEMR = Ministry of Energy and Mineral Resources; MoSA = Ministry of Social Affairs; PLN = Perusahaan Listrik Negara; TNP2K = Tim Nasional Percepatan Penanggulangan Kemiskinan (The National Team for the Acceleration of Poverty Reduction).

Source: Asian Development Bank

IV. ASSURANCE

36. The government and PLN have assured ADB that implementation of the JFPR grant shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PID and the grant agreement.³⁶

³⁴ JICA. 2018. Press Release. [Contributing to the Fisheries Activities in Outer Islands by Developing Fishing Port Facilities and Fish Markets.](#)

³⁵ NZMATES: [New Zealand – Maluku Access To Renewable Energy Support.](#) 2018.

³⁶ Legal document to be signed by the government and ADB.