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Environmental and Social Systems Assessment (ESSA)

INDONESIA POWER DISTRIBUTION DEVELOPMENT PROGRAM FOR RESULTS

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The Environmental and Social Assessment (ESSA) of the Indonesia Power Distribution Development Program for Results was prepared by a Bank team comprised of Kian Siong (Environmental Specialist, GP ENR) and Sulistiowati (Social Development Specialist, Consultant).

Acronyms and abbreviations

ABBREVIATIONS

ADB	–	Asian Development Bank
AMDAL	–	*Analisis Mengenai Dampak Lingkungan* (EIA)
BLH/BPLHD	–	*Badan Lingkungan Hidup/Badan Pengelola Lingkungan Hidup Daerah* (provincial/district Environment Agency)
EGSS	–	Electricity Grid Strengthening – Sumatra
EIA	–	Environmental Impact Assessment
ESSA	–	Environmental and Social System Assessment
EMP	–	Environmental Management Plan
GOI	–	Government of Indonesia
HQ	–	Headquarter
IBRD	–	International Bank for Reconstruction and Development
IUCN	–	International Union for Conservation of Nature
K3-L	–	*Keselamatan, Kesehatan Kerja, Keamanan dan Lingkungan* (Safety Occupational Health, Safety and Environment)
KBA	–	Key Biodiversity Area
kV	–	kiloVolt
LH	–	Lingkungan Hidup (Environment)
MOEF	–	Ministry of Environment and Forestry
OP	–	Operational Policy
PERMEN	–	Peraturan Menteri (Ministry Regulations)
P3BS	–	*Pusat Penyalur dan Pengatur Beban Sumatra* (loan dispatch center of Sumatra)
PAP	–	Program Action Plan
PDDP	–	Power Distribution Development Program
PforR	–	Program for Result
PCB	–	Polychlorinated Biphenyls
PIU	–	Program Implementation Unit
PLN	–	*Perusahaan Listrik Negara* (State Electricity Corporation)
PLN Decree	–	Decree of the Board of Directors of PLN
PMU	–	Program Management Unit
ROW	–	Right-of-Way
RUPTL		Rencana Usaha Penyediaan Tenaga Listrik (Indonesia's power expansion plan)
SAIDI	–	System Average Interruption Duration Index
SAIFI	–	System Average Interruption Frequency Index
SCM	–	Supply Chain Management
SILM	–	*Sistem Informasi Laporan Management* (Information System for Management Report)
SMK3	–	*Sistem Manajemen Kesehatan dan Keselamatan Kerja* (occupational health and safety management system)
SPPL	–	*Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan*

		Hidup (letter of commitment for the EMP and EMoP)
TA	–	Technical Assistance
UKL/UPL	–	*Upaya Pengelolaan Lingkungan Hidup/Upaya Pemantauan Lingkungan Hidup* (environment management efforts and environment monitoring efforts)
Wilayah	–	PLN Regional Office

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EXECUTIVE SUMMARY

The Indonesia Power Distribution Development Program for Results (PDDP or "the Program") aims i) to increase access to electricity supply, ii) to improve quality of service and distribution efficiency (through reduction of distribution losses) and reliability (through reduced outages and improved voltage conditions) of its delivery in selected geographic areas of Indonesia, iii) To improve power consumption and iv) to improve PLN's institutional capacity for program planning, design, implementation, and monitoring and evaluation. The State Electricity Corporation (PLN) has selected the Sumatra region for coverage under the proposed program based on several specific criteria. Sumatra, with an electrification ratio of about 85% ranks in the middle between Java Bali and eastern Indonesia and it is the largest population center outside Java Bali. Of the total of about 54 million people, nine million have no access to electricity. To improve the likelihood of meeting its program targets, PLN's strategy is to mobilize multilateral funding to complement its own and fill the financing gap for the Sumatra distribution program. Positive environmental and social benefit is expected as major results, specifically, up to almost 3 million customers could be added to the grid in the five year period through 2019 resulting in an increase in the electrification ratio to about 90%. The Program will only finance the power distribution activities in rural and urban areas in Sumatra and most of the additional customers would be in areas already electrified and would thus tend to represent the lowest income households in these areas.

The Program to be supported by the Bank is a geographic slice of the distribution component of the RUPTL (Indonesia's power expansion plan) covering Indonesia's Sumatra region for the period 2015-2019. The estimated cost of the Sumatra distribution program is US$1.45 billion or about 20% of the total national distribution program over the first five years of the 2015-2024 RUPTL. PLN has selected the Sumatra region for coverage under the proposed program based on several specific criteria. First, Sumatra has the largest population center outside Java Bali with about 54 million people, of which nine million have no access to electricity and is an important economic growth center for Indonesia. Second, there are substantial existing and planned generation and transmission investments in Sumatra that require complementary investment in distribution in order to enable the power produced when these investments are commissioned to be delivered to the regional economy. Third, a focus on Sumatra offers the best prospect for fast progress towards achieving the RUPTL's national electrification ration (ER) target of 99.4 percent by 2024. Up to about 3.2 million customers could be added to the grid in the 5 year period to 2019 resulting in an increase in the regional electrification ratio from 85 percent to about 90 percent. Fourth, the region offers the best opportunity for "piloting" the use of the International Financing Institutions (IFI's) performance-based lending instruments, learning lessons, and improving effectiveness of its program expenditure management before attempting to use them in the more difficult terrain of eastern Indonesia. Thus, PLN's strategy is to mobilize multilateral funding to complement its own and fill the financing gap for the Sumatra distribution program.

Typology of work

The PDDP is to increase access to electricity supply by extension of 20 kV distribution lines, meanwhile in order to improve the efficiency through reduction of distribution losses, distribution substation will be added to the distribution lines and finally for increasing the reliability through reduced outages and improved voltage conditions, switching substations will be constructed.

- **Extension of 20 kV distribution lines.** Installation of new poles and power grid which for most cases will be placed along the right of way (ROW) of existing roads owned by the district/provincial government. Besides the new poles, the distribution expansion can take place in form of double feeder system (i.e. network expansion using the same pole).
- **Installation of distribution substations *(Gardu Distribusi)***. There are two typical distribution substations to be installed:
    - *Gardu Cantol*, i.e. distribution transformer that is mounted to a single pole
    - *Gardu Portal*, i.e. distribution transformer that is installed on a pad (platform) created by two poles
- **Construction of switching substations *(Gardu Hubung)*.** The landed power distribution facilities to improve the reliability of power supply. Switching substations will require an area of approximately 48 m^2.

Institutional and Implementation Arrangement

PLN Regional Office in charge for distribution is known as PLN *Wilayah* (or *Wilayah*) There are six *Wilayahs* plus one distribution unit in Sumatra which cover; (i) Aceh; (ii) North Sumatra; (iii) West Sumatra; (iv) South Sumatra, Jambi, and Bengkulu; (v) Riau and Riau Islands; (vi) Bangka Belitung; and (vii) Lampung (Distribution unit). *Wilayahs* are responsible for the construction, operation, and maintenance of distribution lines (20 kV).

The Program will be administered by a central Program Management Unit (PMU) at PLN HQ, but the physical implementation activities will be carried out by *Wilayahs* that serve as Program Implementation Units (PIUs). The *Wilayahs* have been carrying out similar programs over the years and are experienced and capable of managing the distribution construction work envisaged under the program. Most material requirements will be requisitioned from approved suppliers under PLN Supply Chain Management (SCM) system and the balance of items will be procured locally by the *Wilayahs*. The construction works contracts will be procured by the *Wilayahs*. All implementation activities will be carried out by the respective contracts divisions within each *Wilayah* and overseen by the distribution systems manager under the *Wilayah* General Manager. The PMU supported by PIUs will bear overall responsibility for the work program, quality and timeliness of the program works, and its satisfactory completion.

Environmental and Social Management.

Environmental Management. PLN both HQ and *Wilayahs* have dedicated safeguard staffs. The HQ staff is responsible for policy matters and overall supervision while the staff in *Wilayahs* is responsible for the project implementation, supervision and reporting. At the HQ, the Division of Health, Safety, Security and Environment (*K3-L*) under the Director of Human Capital Management, comprising four fulltime staffs manages the environmental and social safeguards

issues all over the country. Meanwhile, each *Wilayah* has an environmental unit (some *wilayahs* merge environmental unit with unit of Electricity Safety and Occupational Health and Safety). The Environmental unit in *Wilayah* is the main unit responsible for the environmental and social management, including the preparation of the environmental documentation and the analysis and follow-up of environmental supervision. Depending on the number/scale of projects, this safeguard unit in *Wilayah* is comprised of two or three staffs to oversees the compliance of safeguards related laws/regulations and PLN guidance. Each individual *Wilayah* will be responsible for the construction work as well as management of environmental and social impact due to the Program.

PLN has been implementing many power sector projects funded by multilateral agencies for over 20 years; the projects include the existing World Bank funded *Upper Cisokan Pumped Storage Hydro-Electrical Power, Indonesia Power Transmission Development Project* (IPTD1&2) and many others. The PLN has acquired sufficient knowledge and experience in managing environmental and social safeguards issues. And in regular basis, to enhance its staff capacity, both staffs from HQ and *Wilayahs* are given opportunities to attend trainings (including training on environmental and resettlement safeguards) provided by the Education and Training Unit of PLN Corporate (*Pusdiklat*) twice per year.

Social Management. PLN particularly the seven *Wilayahs* in Sumatera are responsible for handling complaints for all cases including environmental and social issues. *Wilayah* is also responsible for obtaining land for installing poles in the right-of-way and direct purchase of land for switching substation by the Program activities. In most cases, distribution network does not require land acquisition and very few social impacts are expected. However, in some locations, poles installation located in private land may need re-alignment should the poles would block the access owner to the property (e.g. the house entrance). The Program may need small piece of land for switching substation ($6x8m^2$), in which *Wilayah* will carry out the land acquisition on the basis of willing buyer willing seller (direct purchase). Funds to purchase the land are provided by each *Wilayah* and will not use the loan funds.

Other donors

The Asian Development Bank (ADB) has prepared and negotiated a Results Based Loan (RBL) of US$600 million to PLN. The ADB RBL instrument is very similar to the PforR. The RBL will support PLN's transmission and distribution expenditure program over the 2015-2019 period in Sumatra region. Thus, both ADB and the Bank are proposing to provide parallel financing for the same distribution program in Sumatra over the same period. The only difference in program coverage is that of the US$600 million ADB Loan about US$180 million will be used to support prior results of the transmission component of the RUPTL; otherwise the Disbursement-Linked Indicators (DLIs), the implementation, monitoring and evaluation arrangements have been successfully harmonized through consultations and information sharing during the preparation process. ADB has also signaled to the Bank their intention to adopt the principle of third party verification of results that will be used for the PforR.

Environmental and Social Impacts

Environment impacts. Program will only finance the power distribution activities at rural and urban areas in Sumatra region. The Program will screen out any high risk activity as defined in the Ministry of Environment Regulation (*PERMEN*) No 05/2012 on Type of Activities Requiring AMDAL (i.e. full environmental assessment or Category A as per WB Safeguard Policies). The Program will also exclude any activity within or adjacent the protected areas, national park, natural habitat. The extension of power distribution lines itself is not covered under the *PERMEN* No 05/2012 due to its low potential impacts.

Wilayahs have been carrying out similar programs over the years and have applying environmental safeguard measures stipulated in Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 on Construction Standard for Low Voltage Power Network and PLN Decree No.606/2010 on Construction Standard for Medium Voltage Power Network, PLN Decree No.605/2010 on Construction Standard for Power Distribution Substation and Switching Substation. Based on site visits to the recently and ongoing distribution work, the team concludes that the *Wilayahs* have adequate capacity in managing the distribution construction work envisaged under the Program, although some improvement notably a better construction site management.

Social impacts. The Program will not have negative impact to communities of indigenous peoples. The Program will be implemented in both rural and urban areas that are already electrified (with existing access roads available for operation and maintenance). Results of public consultation in five *Wilayahs* showed all parties support and even requested the PLN to expedite implementation of the Program. In order to allow fast implementation, impact on social and environmental shall be minimum, thus for this reason, the Program will avoid work in forest or conservation area or protected forest that needs environmental permits from Ministry of Environment and Forest. Representatives of indigenous groups participated in the public consultation and voiced that the program should benefit and bring positive impacts to the groups. They encourage PLN to provide electricity access to all citizens and request the PLN not to ignore their existence. The groups also mentioned that they have been waiting for electricity connection for long time and will participate in consultation process prior to the construction to reach consensus on how the Program will be implemented.

The activities to be financed under the Program will at most not require acquisition of land. Poles installation normally take place within ROW owned by the district or city or provincial government that will not require land acquisition or cause physical or economic displacement. On special cases, if land acquisition is required for switching substation, the social impact is expected to be minor as the acquisition will normally affect narrow strips of land without dwellings or other structures. Social impact due to the land acquisition for switching substation is minor considering the size ($6x8m^2$) and the number of substations to be constructed is very limited. PLN experiences in implementation of distribution lines extension shows there is no physical displacement of person due to land acquisition except minimum number of trees that are not located at forest area/protected area.

Environmental and Social Performance of the Program

Environment. Environmental documentation reviewed, information collected during interviews and consultations with main stakeholders as well site visits to several subproject sites indicate

that the environmental and social management that PLN applies to distribution lines extension are encouraging in preventing and reducing environmental and social impacts and overall in compliance with the core principles and key elements of the OP 9.00. The country legislation, among others aspects i) requires an environmental impact assessment for any type activity potentially generating adverse impact; ii) protects native forests and endangered species, iii) establishes controls to avoid pollution, and iv) promotes health and safety at work sites. Regarding management capacity, the PLN has qualified and motivated staffs to carry out environmental and social management and monitoring of the works of the Program.

Related to the distribution activities, the requirement for environmental impact assessment is not covered by GOI's legal framework, however environmental mitigation measures are stipulated in Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 on Construction Standard for Low Voltage Power Network[1] and PLN Decree No.606/2010 on Construction Standard for Medium Voltage Power Network[2], PLN Decree No.605/2010 on Construction Standard for Power Distribution Substation and Switching Substation[3]. PLN implements good practices on managing environmental and social impacts, e.g. conducting meaningful public consultation in planning stage, provision of waste storage and segregation, and the use of environmentally accepted equipment such as non-polychlorinated biphenyls (PCB) transformers.

Worker health and safety is the first and foremost in PLN project implementation. To address the potential risks on workers' health and safety, SMK3 (*Sistem Manajemen Kesehatan dan Keselamatan Kerja* or occupational health and safety management system) was established by PLN respectively for transmission, main substation and distribution. The system, however needs to be strictly and consistently enforced all the time among workers and contractors. Performance of occupational health and safety and safeguard compliance are reported quarterly through the online system (i.e. SILM, *Sistem Informasi Laporan Managemen*-- or Information System for Management Report), accessible by authorized staffs but regular monitoring by Wilayahs needs to be done to make sure that workers and contractors are implementing health and safety measures at the work place. The SILM has scoring system to track the performance and progress of operational aspects in *Wilayahs*, including environmental and social management performance.

Social. PLN carries out preliminary survey with meaningful consultation in the planning stage as part of the annual work plan preparation. Socialization of the plan includes consultation that may affect to non-land assets (mainly trees) and agreement from land owners for use of land in case poles need to be located on private land. PLN has a proven capacity to implement distribution project financed by PLN. In the case of distribution project, *Wilayahs* mitigates social issues effectively and manages the risk sufficient (there was land acquisition only without physically displaced person or economic displacement) and the outcomes were satisfactory from the perspective of affected persons. In term of land acquisition, no significant gaps were identified between the practices and OP 9.00 core principles.

[1] PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:473.K/DIR/2010 Buku 3 – Standar Konstruksi JaringanTegangan Rendah Tenaga Listrik*

[2] PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:606.K/DIR/2010 Buku 5 – Standar Konstruksi JaringanTegangan Menengah Tenaga Listrik*

[3] PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:605.K/DIR/2010 Buku 4 – Standar Konstruksi Gardu Distribution and Gardu Hubung Listrik*

Environmental and Social Risks

Environment. In general, the positive impacts that the program are expected to generate include benefits to the overall economy, improvements to the access to electricity for about 3 million additional customers. While potential adverse environmental and social impacts from the construction activities are low and manageable through the technical guideline of PLN Decrees on construction of distribution lines. There is risk however if enforcement of provisions in the contract is weak that results in community complaint.

Potential environmental risks include: (i) risk of not applying initial screening prior to submission of *Wilayah* annual work plan for the Program to PLN HQ; (ii) risk of inadequate environmental supervision (e.g. Used transformer oil or oil spillage management, health and safety of communities, workers and contractors); and (iii) risk of contractors poor construction site management. Although the *Wilayah*s have been carrying out similar programs over the years and are experienced and capable of managing environmental and social issue related to the construction work for distribution lines, capacity in environmental and social management particularly in *Wilayah*s should be maintained through regular evaluation by PLN HQ (via SILM) and capacity building program (e.g. training). The Program Action Plan includes actions to mitigate these risks and ensure good environmental management practice to be adopted to this program.

Social. The social risks associated to the Program are low, i.e. i) risk of not applying initial screening (i.e. to avoid physical or economic displacement) prior to submission of *Wilayah* annual work plan for the Program to HQ and ii) the risk due to unfair in plants/crops compensation. Capacity in environmental and social management particularly in *Wilayah*s should be maintained through regular evaluation by PLN HQ (via SILM) and capacity building program (e.g. training).

ESSA consultation

A preliminary consultation on the proposed framework of ESSA took place in PLN HQ, Jakarta on September 7th and 9th, 2015; PLN HQ and *Wilayah*s staffs involved in design, construction, supervision, maintenance in distribution, as well as PLN Headquarter Environmental Unit consulted on the preliminary findings of the assessment, the strengths, risk and proposed action plan. Inputs from the consultation were included in the action plan.

Draft ESSA has been disclosed on October 16, 2015 at the Infoshop (English version) and PLN web sites (Indonesian version). The first public consultation of draft ESSA took place in Bandar Lampung on Oct 19th, 2015, subsequently on Nov 3th and 5th, 2015 it was held in City of Banda Aceh and Tanjung Pandan (Belitung Island) respectively. Two more consultations were in Palembang (South Sumatra) on Dec 10 then Padang (West Sumatra) on Dec 11. Representatives of various local governments (provincial, district/city level) agencies, local universities, communities/ethnic groups and civil society participated the public consultation. In each consultation, Bank staff presented detailed information on the PforR process, the proposed Power Distribution Development Program, the key findings and recommendations of the ESSA. Inputs received during consultations were positive toward the Program implementation though some criticized poor service quality of the PLN (notably was the outage). Inputs/feedback from these consultation are included in final version of the ESSA.

The final ESSA in both English and Indonesia was disclosed on January 8, 2016 before negotiations.

INDONESIA POWER DISTRIBUTION DEVELOPMENT PROGRAM

Environmental and Social Systems Assessment (ESSA)

Introduction

1. This document evaluates the systems currently applied by the State Electricity Corporation (PLN) for power distribution development to manage environmental and social impacts and risks. The main purpose of the evaluation is to determine the extent to which these systems are consistent with relevant core principles and attributes specified in the World Bank Policy, OP 9.00 for programs supported through the Program for Results (*PforR)* instrument, approved by the Bank in January 2012.

2. The assessment was prepared by the World Bank environmental and social specialists in consultation with staffs from the PLN and other relevant stakeholders who were consulted. This assessment is based on: (i) interviews with PLN staffs from the HQ and *Wilayah* and its contractors for operation and maintenance of distribution lines, (ii) site visits to PLN power distribution network projects and interview affected persons, (iii) review of Indonesia environmental and land acquisition regulations, (iv) desk review of relevant documentation including instruments for supervision, monitoring and evaluation.

3. The assessment has eight sections. Section 1 describes the scope of the Program and its institutional context. Sections 2 describes the Program context and potential impacts; sections 3 and 4 describe the Program environmental and social management systems respectively, as defined in laws, regulations, internal procedures, etc. Section 5 assesses the environmental and social management capacity of the implementing agencies and determines the extent to which the environmental and social management systems are consistent with the core principles and attributes specified in the OP 9.00 for programs supported through the *PforR i*nstrument. Section 6 specifies key measures to improve the performance of the environmental and social management systems (Inputs to the Program Action Plan). Section 7 provides an environmental and social risk rating and proposes risk mitigation measures. Finally, Section 8 describes the support that the Bank will provide in environmental and social areas (Inputs to the Implementation Support Plan).

1 PROGRAM DESCRIPTION

1.1 Program Scope

4. PLN's current power expansion plan comprising generation, transmission and distribution investment requirements (the "Rencana Usaha Penyediaan Tenaga Listrik" or RUPTL) covers the period 2015-2024. The broader context for the RUPTL is the Rencana Umum Ketenagalistrikan Nasional (RUKN) which is a 20-year national policy document approved by Parliament. The RUKN provides the GoI's policy guidance for preparation of the RUPTL. This guidance is related primarily to the projected energy demand and desired targets

for electrification and the energy mix of production. The current RUKN was approved by Parliament in 2008 and covers the period up to 2027.

5. To close the power infrastructure gap which is constraining economic growth the current administration is focusing on implementation of the 5-year time slice of the RUPTL covering the period 2015-2019. Consistent with both the RUKN and the RUPTL the key objectives of the 5-year time slice are to increase access to electricity for household consumers and to meet the economy's power needs while improving efficiency and reliability of supply. Its specific key targets are to increase generation capacity by 35 GW and increase access to electricity from 85%, to 97% by 2019. Further, PLN's detailed implementation plan envisages improvements in efficiency (losses reduction) and reliability indicators (SAIDI and SAIFI).

6. The estimated total costs of the RUPTL for 2015-2019 are US$83.4 billion of which US$58.9 billion is for generation, US$17.1 billion for transmission and US$7.4 billion for distribution. The Government's program on which the proposed PforR is based is the distribution component of the 2015-2019 time slice of the RUPTL which entails activities to improve distribution system planning capabilities, connect new customers, improve existing distribution networks, and increase the quality of services.

7. The PforR Program to be supported by the Bank is a geographic slice of the distribution component of the RUPTL covering Indonesia's Sumatra region for the period 2015-2019. The estimated cost of the Sumatra distribution program is US$1.45 billion or about 20% of the total national distribution program over the first five years of the 2015-20124 RUPTL. PLN has selected the Sumatra region for coverage under the proposed program based on several specific criteria. First, Sumatra has the largest population center outside Java Bali with about 54 million people, of which 9 million have no access to electricity and is an important economic growth center for Indonesia. Second, there are substantial existing and planned generation and transmission investments in Sumatra that require complementary investment in distribution in order to enable the power produced when these investments are commissioned to be delivered to the regional economy. Third, a focus on Sumatra offers the best prospect for fast progress towards achieving the RUPTL's national ER target of 99.4 percent by 2024. Up to about 3.2 million customers could be added to the grid in the 5 year period to 2019 resulting in an increase in the regional electrification ratio from 85 percent to about 90 percent. Fourth, the region offers the best opportunity for "piloting" the use of the IFI's performance-based lending instruments, learning lessons, and improving effectiveness of its program expenditure management before attempting to use them in the more difficult terrain of Eastern Indonesia. Thus, PLN's strategy is to mobilize multilateral funding to complement its own and fill the financing gap for the Sumatra distribution program.

8. The Program will support implementation of activities designed to achieve PLN's program goals in five result areas as follows.

Table 1: Program Results Chain

Result Area	Activities	Intermediate indicators/outputs	Outcomes
RA 1: Improve access to electricity	Extension of 20kV distribution lines	**Additional Length of distribution lines (increase in kms)** Additional Capacity of distribution transformers (increase in MVA)	**Number of residential customers** connected
RA 2: Improved quality of service	System reinforcement Customer outage management	Additional Length of MV distribution lines (increase in kms) **Number of MV feeder interruptions per 100 kms** Additional Capacity of distribution transformers (increase in MVA)	Reduction in SAIFI and SAIDI
RA 3: Improved distribution efficiency	Rehabilitate and upgrade distribution lines Rehabilitate and upgrade substations Improved metering	Approved annual work plans (RKAP) Percentage of work plans completed **Additional distribution transformer units**	Reduction in distribution losses
RA 4: Increased power consumption	All above activities will contribute to this result area	Percentage of work plans completed	**Volume of additional energy sales (increase in TWh)**
RA 5: Institutional strengthening and capacity building	• Improve distribution planning • Staff training • Post PLN Procurement regulations on website • Improve procurement and contract management • Conduct market research of local mfg. capacity for MDU items • Conduct a diagnostic analysis of PLN's project management system • Disclosure of PLN's blacklist onto website & electronic portal	**Approved annual work plans (RKAP)** **Issue revised distribution planning guidelines** **Enhanced use of GIS facilities** **Integrate budgeting with ERP in one priority region** Number of certified and skilled systems planners and procurement staff Contract data publicly available Reduced time for contract award/amendment & signing Mfg. capacity shortfalls if any, identified and actions taken to broaden the mfg. base. Reduced time for bid evaluation PLN blacklist made publicly available	Increased efficiency in program implementation Increased transparency in procurement Increased efficiency in program implementation Improved procurement & contract management performance for EPC contracts Improved transparency

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9. The selection of DLIs was guided by three key considerations. For each result area, the use of the identified outcome indicators as DLIs was considered first as this would directly provide the incentives for meeting program goals. The second step was to consider the feasibility of measuring, monitoring and verifying the indicators. In cases where the measurement and monitoring of outcome indicators presented difficulties due, for example, to deficiencies in PLN's systems the use of output/intermediate indicators was considered. In the latter situation, the choice of specific intermediate/output indicators was guided by their significance in signaling progress towards achieving the planned outcomes. Finally, the selection of DLIs was informed and coordinated with the Asian Development Bank who is financing the same program in Sumatra. The selection of DLIs has therefore been completely harmonized with the ADB.

10. Apart from the institutional strengthening and capacity building results area all the indicators are already being measured and monitored by PLN. The rationale for the choice of DLIs by result area is further elaborated below:

a. **Improved Access to electricity**: The number of residential customer connections is a key indicator used by both PLN and the GOI to assess progress of the country's electrification goals. This is a direct outcome measure for access that is easy to measure, monitor and verify. In addition to this indicator the task team and PLN agreed to also use the length of additional MV distribution lines as an additional DLI for increased access given that it is an important signal of progress towards increasing customer connections. It will also measure network coverage which is an indicator of possible additional connections that will materialize in future.
b. **Improved quality of service**: Ideally SAIDI and SAIFI would be the best outcome measures for assessing the quality of services. However, PLN's procedures for measuring SAIDI and SAIFI while improving are still work in progress and will be strengthened with the conversion of distribution control centers into full SCADA functionality and with the completion of installation of GIS facilities in all Wilayahs during the Program period. Hence the Bank and PLN agreed to use the number of MV feeder technical interruptions per 100 km (an intermediate indicator) as the DLI for this result area. Nonetheless SAIDI and SAIFI indicators will be monitored and reported under the Program's Results Framework.
c. **Increased efficiency:** Distribution system losses are a key measure of a utility's operational efficiency. Recent trends, however, have seen distribution losses increasing in both 2013 and during the first half of 2015. The improvement of distribution losses is heavily dependent on the completion of the new grid substations and associated transmission lines (a complementary project but outside the scope of this project). Without the timely completion of these grid substations technical losses are expected to increase with the added network loads. Furthermore while some investments in the Program will help to reduce losses others such as network expansion may actually increase losses. The Bank and PLN have agreed to focus efforts on improving network planning to minimize losses. They have also agreed to use additional number of transformer units installed, an intermediate indicator, as the DLI for this result area. The additional number of transformers connected will help to PLN to focus on reducing LV feeder lengths and increasing MV coverage which will help reduce the technical losses in the LV system.

d. **Increased power consumption:** This is a straightforward measures that captures the translation of increased residential customer connections (the DLI under RA 1) into actual access benefits for the beneficiaries. It also captures the increase in consumption of existing consumers, which sometimes need to be facilitated by network improvements. This also is a measure that PLN ordinarily monitors and is easily verifiable through billing reports. The use of this measure as a DLI will give PLN incentive to increase actual power flows and not only customer connections.
e. **Institutional strengthening and capacity building:** The three DLIs for this results area are based on the prioritized recommendations of the draft technical and fiduciary assessments**.** For prior results the approval of 2016 work plans is intended to provide PLN with an incentive to expedite the approvals before the start of its fiscal year so that its *Wilayahs* have enough time to fully implement the plans within the year. The two DLIs for the implementation phase are intended to strengthen distribution system planning and improve program budgeting. The measures supported by the institutional strengthening and capacity building results area will be expected to positively impact implementation of the entire PLN distribution program beyond Sumatra and beyond the RPJMN in the long term.

11. **Implementing Agencies**. PLN's regional offices are called PLN *Wilayah*. There are six *Wilayah*s plus one distribution unit in Sumatra which cover; (i) Aceh; (ii) North Sumatra; (iii) West Sumatra; (iv) South Sumatra, Jambi, and Bengkulu; (v) Riau and Riau Islands; (vi) Bangka Belitung; and (vii) Lampung (Distribution unit). They are responsible for the construction, operation, and maintenance of Distribution network.

12. Under the new organization structure, Environmental Planning and Management Sub-Division has new name as Division of Health, Safety, Security and Environment (*K3-L*)[4] under the Director of Human Capital Management (previously under Director for Construction). The Division of *K3-L* is divided into two sub-division: Health, Safety, Security and Environment. Under Senior Manager of Environment there are Deputy Manager (DM) for Planning and Deputy Manager for Operation. DM for Planning is responsible for reviewing safeguards document for project preparation and DM for Operation is responsible for monitoring and evaluation of *Wilayah* performance in environmental and social management via SILM (*Sistem Informasi Laporan Management* – Information System for Management Report).

13. Division of Distribution has also shifted from Director for Construction to Regional Directors who is the main unit responsible in the Program for planning programming.

14. PLN headquarter is responsible for policy matters whilst the staff in *Wilayah* is responsible for the delivery. PLN headquater role is to monitor and evaluate environmental and social safeguards issues all over the country. PLN has long experience in dealing with World Bank safeguards policies. PLN has implemented Bank projects in the past and PLN staffs have received sufficient training over time on the Bank's environmental and social safeguards policies and their implementation. Within PLN itself, to improve the quality of staff the Education and

[4] *Divisi Keselamatan, Kesehatan Kerja, Keamanan dan Lingkungan* (K3-L)

Training Center of PLN provides trainings (including training on environmental and resettlement safeguards) two times in a year. All staffs are entitled to select and attend the trainings.

15. **High-Risk Activities**. During preparation, it was confirmed that the Program will not include high-risk projects that requires preparation of EIA documents (as per the Ministry of Environment Regulation (*PERMEN*) No: 05/2012 on Activities requiring AMDAL). The Program will exclude construction of power plant, main substation (*Gardu Induk*) or power transmission network line that under the *PERMEN* No 05/2012 would be classified as activities requiring full environmental assessment that is locally known as AMDAL. Activities requiring AMDAL are the ones likely to generate the most adverse environmental and social impacts and would correspond to Bank Category A projects, under investment lending operations.

1.2 Typology of Works

16. Table 2 summarizes the typology of construction work to be implemented through the Program.

Table 2: Typology of activities which will support the Program

Activities	Pictures of scompleted work
Pole and Grid installation In most cases however, the poles will be installed along the right of way (ROW) of existing roads owned by the district/provincial government. Besides the new poles, the distribution expansion can take place in form of double feeder system (i.e. network expansion using the same pole)	
Distribution substations (*Gardu Distribusi*) installation. There are two typical distribution substations to be procured and installed. i) *Gardu Cantol*, i.e. distribution transformer that is mounted to a single pole ii) *Gardu Portal*, i.e. distribution transformer that is installed on a pad (platform) created by two poles	 
Switching substation (*Gardu Hubung*). The landed power distribution facility is to improve the reliability of power supply. Construction of switching substations will require an area of approximately 48 m^2.	

1.3 Main Stakeholders related to the Program

17. The main stakeholders related to the Program implementation are PLN at HQ and *Wilayah* (including *Area* and *Rayon*) and contractors. *Wilayah* has several sections and units involved in planning, design, implementation and supervision of the power distribution works

18. In HQ level, Division of Health, Safety, Security and Environment (*K3-L*) is responsible for monitoring and evaluation of *Wilayah* performance in environmental and social management via SILM (*Sistem Informasi Laporan Management* – Information System for Management Report).

19. *The seven Wilayahs* are responsible for the construction, operation, and maintenance of Distribution network and reporting through SILM to HQ.

20. Other stakeholders include in the Program are provincial, district and city government in order to coordinate permit and implementation of the construction. Implementation of the Program requires principle permit (*Ijin Prinsip)* and other permits (e.g. building construction permit for switching substation, cutting trees) from local government prior construction. *Wilayah* is responsible for dealing with the permits while *Area* is responsible for dealing with ROW acquisition and possible removal/cutting trees within a distance of 2.5 m of the poles and handling any grievances/complaints from the communities in term of environmental and social issues both during and post construction.

2 PROGRAM CONTEXT AND POTENTIAL IMPACTS

2.1 Environmental Context

21. The westernmost and second largest island (after Borneo) of Indonesia, Sumatra (473,970 sq km) is 1,790 km long and 435 km wide and is fringed with smaller islands off its western and eastern coasts. The Bukit Barisan, a volcanic mountain range with more than 30 active volcanoes, traverses its length, reaching 3,800 m at Mt. Kerinci. Rising in the Barisan range are several large rivers, including the Hari, Indragiri, and Musi; some rivers are developed for hydroelectric power. In the north is the great salt lake Toba (1,140 square km), the largest of many mountain lakes. Sumatra's climate is hot, except in the highlands, and extremely moist. Because of these, the vegetation is luxuriant, and much of the eastern half of the island is swampland. The interior is covered largely by impenetrable rain forests. Among the native animals are elephants, clouded leopards, tapirs, tigers, Malayan bears, and snakes. Three national parks on the island—Mount Leuser, Kerinci Seblat, and Bukit Barisan Selatan—collectively were designated a UNESCO World Heritage site in 2004.

22. The Sumatra is administratively subdivided into ten provinces. Majority of the population lives in rural areas; the highest population density is around Medan in North Sumatra Province. Road networks are fairly good across the Sumatra and its smaller islands off its western and eastern coasts (e.g. Bangka Belitung and Riau Archipelago). The high economic growth spreads over island with growth center at capital of the province (e.g. Medan, Pekanbaru, Palembang, Lampung) while most of the energy resources are located in the south. Thus power flows from south to north. Figure 1 shows the typical peek time load flow pattern (Annex 1: Sumatra Island existing and future development power transmission lines).

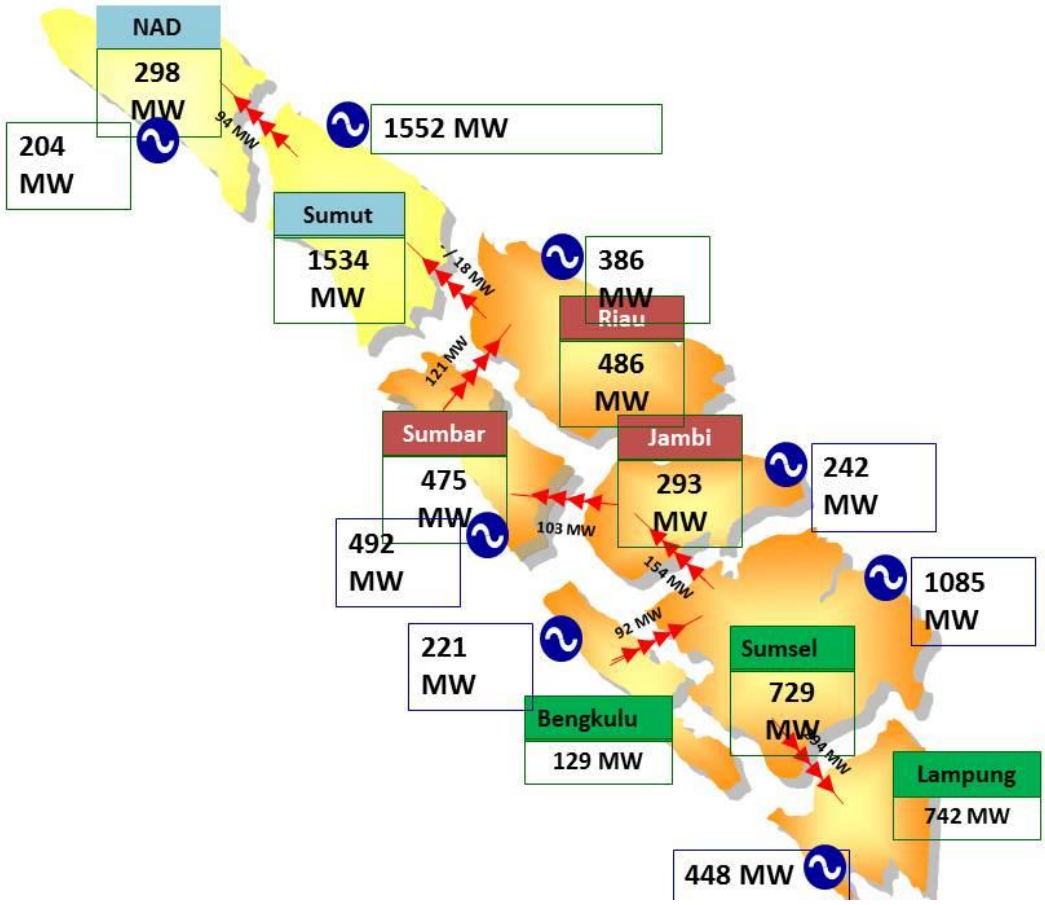


Figure 1: Load Flow of Sumatra Interconnection Systems at Peak Time (June 2015)

2.2 Potential Environmental Impacts

23. Any activities requiring AMDAL that would be classified as Category A under WB Safeguard Policy and it will not qualify for PDDP support. In addition activities located in or directly adjacent conservation areas (e.g. protected areas/forest: national park, wildlife sanctuaries/reserves) shall be excluded from the *Program* (Annex 2 Existing protected areas in Sumatra)

24. Expansion and reinforcement of distribution network (including installation of distribution transformers, poles, service connections and feeders, and customer meter boxes and circuit breakers) will take place in rural and urban in areas already electrified (with existing access roads available) and therefore the potential impact on environmentally sensitive areas is not likely.

25. All activities potential construction-related impacts include disturbance of traffic, access disturbance, vegetation, noise, dust, vibration and waste. Transportation of equipment and materials (i.e. poles, transformers) may generate some noise, dust and traffic. Potential impacts

prior to construction stage include trimming of trees within the ROW of distribution lines (Distribution network), noise and traffic.

26. Potential risks to occupational and community health and safety include electromagnetic field (EMF) is low as it is under 20kV. All the impacts and risks are reversible and site- specific, and can be mitigated and/or managed by PLN's current practices.

27. Based on the site visits to the recently completed and ongoing PLN power distribution project, the following activities and impacts have been identified to be typical of the distribution activities:

- Installation of new poles: noise, dust, construction debris;
- Cutting/trimming of vegetation/trees: occurring along the ROW for the power grid; but it can also affect private own trees.
- Management and storage of power cable, poles and transformers along ROW: traffic and access disruption;
- Traffic control and public safety: traffic issues during materials and equipment shipment and construction (e.g. pole erection, heavy equipment mobilization) can generate accidents, and safety problems;
- Occupational health and safety of workers and contractors.

28. The sources of construction materials and equipment for distribution work:

- The concrete poles, transformers and cable are to be supplied by PLN Supply Chain Management (SCM), through internal purchase order by *Wilayah*s
- Other supporting construction material (e.g. cements, sand and gravel for switching substation construction) will be obtained locally.

2.3 Potential Social Impacts

The Program is expected to generate many benefits, such as (i) number of residential customers connected, (ii) reduction in SAIFI[5] and SAIDI[6], (iii) improved voltage profile, (iv) reduction in distribution losses, GHG emission reductions, (v) volume of additional energy sales (increase in TWh), (vi) increased procurement transparency, and (vii) increased efficiency in program implementation.

29. The potential of social impacts related to the construction activities of the Program are expected to be low as well as impacts related to land acquisition. As a general rule, the installation of poles takes place within existing ROW and, therefore, do not require the acquisition of additional land or cause physical or economic displacement. In most cases however, the poles will be installed along the ROW of existing roads owned by the district/city/provincial government and possible removal/cutting trees located within a distance

[5] The **System Average Interruption Frequency Index (SAIFI)** is commonly used as a reliability indicator by electric power utilities. SAIFI is the average number of interruptions that a customer would experience.
[6] The **System Average Interruption Duration Index (SAIDI)** is commonly used as a reliability indicator by electric power utilities. SAIDI is the average outage duration for each customer served

of 2.5 m of the poles. Installation of distribution transformers can be attached in one pole called *gardu cantol* or use two poles to support the platform called *gardu portal,* while switching substation has a stand-alone building (see Table 1).

30. For installation of concrete poles (< 0,2m^2) including installation of distribution transformers, it is common practices in rural and urban areas for communities in need of electricity to donate a small piece of land to *Wilayah*. The location of poles can be changed if necessary to avoid potential social impact. Even within the same alignment, the contractors are able to avoid disturbance of non-land assets (mainly trees) by setting the height of poles and conductors higher or by replacing the bare cable with an insulated cable which can go along/through obstacles including trees. This flexibility allows PLN to optimize the alignments of distribution lines including the locations of the poles taking into full consideration the opinions/requests of the stakeholders. PLN's practice is to minimize the siting of concrete poles on private lands and to avoid disturbance of non-land assets to the maximum extent possible or else to obtain the owners' agreement well in advance during the planning stage for the use of private land for utility poles and cutting down of a few tress. The poles include distribution transformers may also be installed on the premises of customers who require power at the primary distribution level such as real estate, shopping center, industrial estate.

31. In the case the Program affects to non-land assets that cannot be avoid and need to be removed or cut, the owners will be provided with a "cutting cost" for the affected trees or compensation for other non-land assets, if any, only if requested by the affected persons. The "cutting cost" or compensation, if any, is handled by contractors based on negotiated settlement referring to the local market rates of the assets. The cost of compensation is borne by the contractors as part of the mobilization cost needed for the clearance of the project site. The budget for such compensation is covered by their overheads, contingency, and profit. However, in Palembang there is a good practice that compensation for a few of affected trees is given in kind, i.e. new trees. Type and value of compensation on trees it depends on mutual agreement both parties.

32. The Program activities related to extension of switching substations (including installation of reactors and capacitors and expansion of switchgears) will give priority by optimizing the existing substations owned and managed by PLN. However, if the existing substation has the capacity overloaded, to increase the reliability of the supply, a new substation will be constructed. Nevertheless, the number of new switching substation in the Program would be limited. New switching substations would need small piece of land (6x8 m^2) and would be obtained by *Wilayahs* through direct purchase from landowners on the basis of willing buyer willing seller. Since land acquisition is limited, and there is no physical or economic displacement so impacts on the individual affected persons is to be minor.

33. **Indigenous peoples or ethnic minority.** The Program will be implemented based on mutual agreement between PLN and the community including indigenous people or ethnic minority. Without mutual agreement, PLN Wilayah will not implement the work at the sites. Distribution expansion is a routine work and the main activity of *Wilayah*. Before construction, PLN does consultation and provides preliminary information about distribution activity plan. Contractor also conducts consultation and information before construction. Results of public consultation in five *Wilayahs* showed all parties including indigenous people or ethnic minority

support and even requested the PLN to accelerate implementation of the Program. In order to allow fast implementation, impact on social and environmental shall be minimum, thus for this reason, the Program will avoid work in forest or conservation area or protected forest that needs environmental permits from Ministry of Environment and Forest. Representatives of indigenous groups participated in the public consultation and mentioned that the program should benefit and bring positive impacts to the groups. They encourage PLN to provide electricity access to all citizens and request the PLN not to ignore their existence. The groups also mentioned that they have been waiting for electricity connection for long time and will participate in consultation process prior to the construction to reach consensus on how the Program will be implemented.

2.4 Mitigation and Prevention Measures to Reduce Environmental Impacts

34. The PLN Decrees specifies details measures to prevent, reduce and mitigate impacts during constructions of distribution lines. Example of the contract documents for distribution works shows strict provisions and measures aiming for good construction work practice are stipulated in the contract. Some of these measures are listed below.

- Follow the instruction of PLN Decree on construction of distribution lines (e.g. installation of poles including cable distribution transformers, switching substation) to reduce negative effect due to noise, dust, rock debris and traffic disruption
- Minimize cutting/trimming of vegetation along the ROW for the power cable grid; ensure the permit is granted by the authority, and if the tree is privately owned, ensure prior agreement with trees owner has been obtained or compensation has been paid before construction.
- Implement good management and storage of power cable, poles and transformers along ROW to minimize impact on traffic and access disruption.
- Place staff to control road traffic and install traffic and prevention signs along the road of working area to prevent accidents, in particularly during materials and equipment shipment and construction (e.g. pole erection, heavy equipment mobilization)
- Ensure occupational health and safety measures to ensure workers safety (e.g. personal protection equipment).
- Avoid construction works during peak traffic hours and if necessary place road signaling and light
- Make appropriate waste management rules to handle domestic and hazardous wastes (e.g. transformer oil leakage).

3 ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 Institutional Responsibilities

35. **Institutional arrangements for implementation.** The program will be administered by a central Program Management Office (PMO) located at PLN HQ, but the physical implementation activities will be carried out by *Wilayah*s as Program Implementing Units (PIUs). *Wilayah*s have been carrying out similar programs over the years and are experienced and capable of managing the distribution construction work envisaged under the Program. All implementation activities will be carried out by the respective contracts divisions within each *Wilayah* and overseen by the distribution systems manager under the *Wilayah* General Manager. The PMO supported by the *Wilayah*s will bear overall responsibility for the work program, quality and timeliness of the program works, and its satisfactory completion.

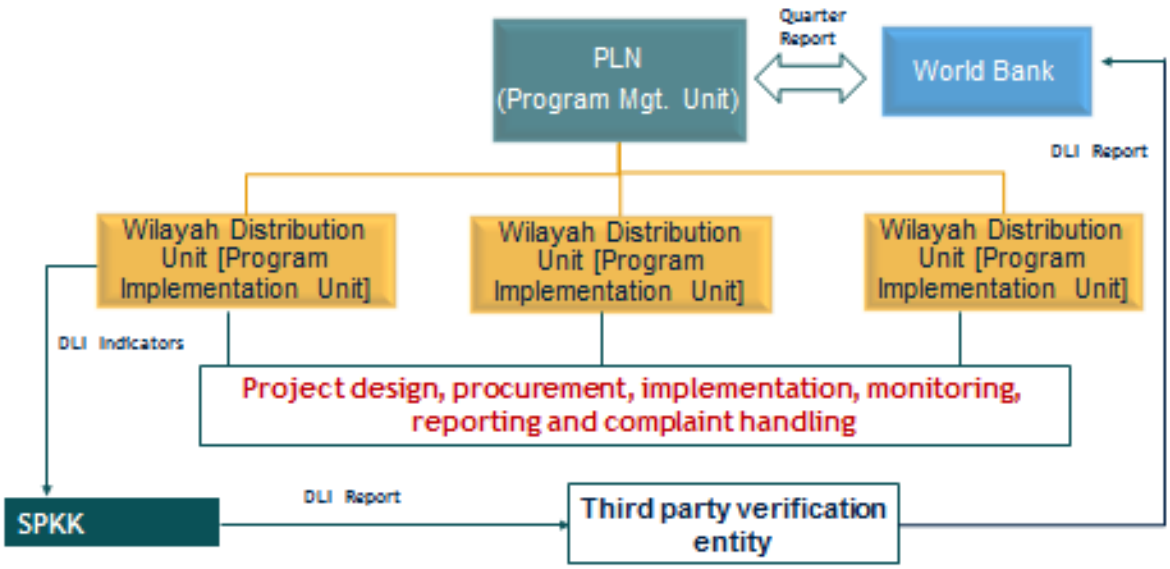


Figure 2. Institutional and Implementation arrangement

3.2 National Regulatory Framework

36. **National Policy and legal frameworks on EA.** The first EIA in Indonesia was carried out in 1972, since then the environmental awareness has constantly increased and culminated in 1982 when the first Law no 4/1982 on the Principles on Environmental Protection. Since then the environmental regulation and legislation has evolved and nowadays, more than 50 in form of laws, government regulation (PP), ministerial regulation and decrees (*PERMEN and Kepmen*) and other regulations applicable to the environmental management of the Program; this regulatory framework provides reasonable assurance that the environment will be protected from negative impact stemming from PDDP implementation. For instance, the country has legislation that requires environmental impact assessment, protects the native forest and endangered species,

controls water pollution, and enforces health and safety at work sites, management of hazardous wastes among others. The EIA in Indonesia is known as AMDAL (*Analisis Mengenai Dampak Lingkungan* or EIA), an assessment report on the significant impacts of business or activities on the environment which is necessary for the process of the decision making regarding the implementation of the business/activities. Following the first law on the environmental protection that mentions the need for an activity to carry out AMDAL, that is the Law No 4/1982 and subsequently few amendments with the latest in in 2009 (i.e. *Law No. 32/2009 Regarding Environmental Protection and Management*), the GOI enacted *Government Regulation (PP) No. 27/2012 on Environmental Permit*, which outlines environmental assessment process (and instruments) required for activities potentially generating negative environmental and social impact. Then to streamline the implementation of *PP No. 27/2012*, the Ministry of Environment (MOE) enacted MOE Regulations (*PERMEN*) No. 05/2012 on Type of Activities Requiring AMDAL, *PERMEN* No.16/2012 on Guidelines for Preparation of Environmental Documents, *PERMEN* No. 17/2012 on Guidelines for Public Participation in AMDAL Process and Environmental Permit. The public participation the requirements of AMDAL, UKL/UPL[7] (*Upaya Pengelolaan Lingkungan Hidup / Upaya Pemantauan Lingkungan Hidup* or environmental management efforts and environment monitoring efforts) or SPPL[8] (*Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup* or letter of commitment for the environmental management plan [EMP] and environmental monitoring plan [EMoP]), environmental permit process, guideline of environmental documents' preparation, requirement of community involvement, public consultations (socialization) and grievance redress mechanism, and implementation and monitoring of appropriate mitigation measures to address adverse environmental impacts.

37. The requirement for environmental assessment in Indonesia is based on the prescribed list in the *PERMEN* No 05/2012 on the activities requiring AMDAL. Though general, the list includes the information on the size and potential impacts of the activities that warrants the full assessment (AMDAL). Activities tough listed but because the scale of impact or the size of activities is small will either require of partial environmental assessment (UKL/UPL) or letter for environmental management and monitoring commitment from proponent (SPPL). Three possible environmental categories are:

- AMDAL: projects are considered to cause significant environmental and social effects. The regional environmental agency (BLH or BPLHD[9]) and the proponents shall request the proponent to present a full EIA, made available a summary of the EIA to different stakeholders and perform two-round public consultations of the project, e.g. coal fire power plant (> 100MW), transmission line (> 150 KV), any activities within or adjacent to protected areas

[7] UKL-UPL pertains to the management and monitoring efforts of business/activities that have no significant impacts on the environment, which are necessary for the process of the decision making regarding the implementation of the business/activities.

[8] SPPL is a statement regarding the undertaking to monitor and manage the environmental impact of business/activities which are exempted from the AMDAL or UKL-UPL requirement.

[9] BLH or BPLHD is regional environmental agency, it includes city, district (*kabupaten*) and provincial level. The term of BPLHD is used at the provincial level of environmental agency, for any activities affecting more than one city/district, the clearance is from BPLHD, activities crossing provincial jurisdiction will need clearance from central environmental agency (KLHK = Ministry of Environment and Forestry)

- UKL/UPL: project with moderate potential environmental and social impacts. The project proponent Developers shall request clearance or environmental permit from the local environmental agency (BLH or BPLHD) presenting environmental management and monitoring effort, e.g. construction of main substation (*Gardu Induk*)
  SPPL: projects with low impact, e.g. routine road maintenance work, in this case, the project proponent submitted the SPPL to city/district BLH to obtain clearance.

38. In addition, Government Regulation No. 101/2014 Regarding Management of Toxic and Hazardous Waste Substances regulate the management and disposal procedures for toxic and hazardous waste substances. Law No. 14/2008 Regarding Public Information guarantees the provision of correct information to the public as a form of public services. Law No. 13/2003 Regarding Manpower and Government Regulation No. 50/2012 Regarding Practice of Health and Safety Management System ensure the right of every worker to protection, health and safety to achieve optimal work productivity, and require implementation of a health and safety system. Presidential Decree No. 32/1990 Regarding Management of Protected Area and Law No. 11/2010 Regarding Physical Cultural Resources regulate the procedures and mechanism for the preservation of protected area and cultural heritage respectively.

39. The GOI legal framework exempts distribution development activities from having an environmental assessment prepared provided they are not located in or directly adjacent to protected areas. However, considering that the scale of the impact is reversible and site-specific and that environmental mitigation measures are implemented following *the PLN Decrees*, the current practices will be sufficient to manage the environmental impacts. According to PLN regional offices/units, no outstanding issues/complaints regarding adverse environmental impact caused by distribution development has ever been reported to date.

40. Site visit to *Wilayahs* distribution system warehouse and one of coal power plant, the team found notable spill of oil was observed. Management of hazardous wastes will need to be improved to ensure it complies with PLN[10] SOP for handling hazardous waste. The management of industrial waste can be improved in terms of avoiding and managing oil spillage and utilizing only a licensed third party when disposing hazardous wastes.

41. Assessments undertaken are of the view that the environment safeguards system currently in place through the GOI's environmental laws and regulations as well as PLN's internal guidelines (*PLN Decrees*) are sufficient to comply with the World Bank policy OP 9.00.

Table 3. Main regulations applicable to the operation of the PLN Program

Regulation	Description and PLN compliance
Environmental	
Law No. 32/2009 on Environmental Protection and Management	Main Indonesia legislation aims to protect the environment from development activities. The PLN has strong commitment toward environmental protection and sustainability, the company has ISO 14001 (on Environmental Management System) certification since 2004

[10] PLN has valid license to temporary store the hazardous waste.

Law No. 14/2008 on Public Information	The law assurances the provision of correct information to the public as a form of public services
Government Regulation No. 27/2012 on Environmental Permit	The regulation requires any activity/business potentially generating negative environmental and social impact to obtain an environmental permit. The regulation also outlines environmental assessment process and instruments(i.e. AMDAL or UKL/UPL) required for proposed activity/business. The PLN complies with the regulation requirement by obtaining the environmental permit and implementing agreed environmental action plans (i.e. RKL/RPL or UKL/UPL) for its operation of power plant, transmission, main substation.
Government Regulation No. 101/2014 on Management of Toxic and Hazardous Waste	Government Regulation No. 101/2014 on Management of Toxic and Hazardous Waste regulates the proper management of hazardous waste covering; (i) method of identifying, reducing, storing, collecting, transporting, utilizing, processing, and disposing of hazardous wastes; (ii) risk mitigation and emergency responses to address environmental pollution caused by hazardous waste. The country management of hazardous waste is based on the principle "cradle to grave". Used transformer oil is classified as hazardous waste. Though the PLN has valid license to temporary store the hazardous waste, for final disposal/treatment, it has agreement with the third party who has the valid license to manage the hazardous waste.
Government Regulation No. 50/2012 on Practice of Health and Safety Management	The regulation ensures the right of every worker to protection, health and safety to achieve optimal work productivity, and requires implementation of a health and safety system.
Presidential Decree No. 32/1990 on Management of Protected Area	The decree declares the need to establish protected areas in order to ascertain the sustainable development and protect bio-diversity. It provides basic definition of protected areas, process to establish and to manage protected areas. Under this Program, any activity within or adjacent to the protected areas will be excluded.
Ministry of Environment (MOE) regulation (*PERMEN*) No. 05/2012 on Type of Activities Requiring AMDAL	The regulation prescribes list of activities that are potentially generating adverse impact and therefore require full environmental assessment The distribution line extension is not covered under the *PERMEN* as the activities are considered to have low impact on environmental and social
PERMEN No.16/2012 on Guidelines for Preparation of Environmental Documents	The guideline provides level of detail of environmental assessment, the guideline also requires community involvement, public consultations (socialization) and grievance redress mechanism, and implementation and monitoring of appropriate mitigation measures to address adverse environmental and social impacts
PERMEN No. 17/2012 on Guidelines for Public Participation in AMDAL Process and Environmental Permit	The regulation stipulates the requirement to carry out public consultation as part of the process for preparation of AMDAL (full EA - twice) and UKL/UPL (Partial EA - once)
Social	
Law No. 02, 2012 on the land acquisition for development of public interest	Construction of power distribution or extension is included in public interest PLN will buy the land (if necessary) on willing sell and willing buy basis. Valuation of affected assets must be valuated by licensed appraiser.

Presidential Regulation No. 71 of 2012): Technical guideline for implementation of land acquisition for public purposes	PLN will buy the land (if necessary) on willing sell and willing buy basis.
Presidential Regulation No. 40 of 2014 land acquisition of size < 5 ha	Land acquisition for less than 5 Ha can be executed with direct purchase or land swab or other forms as agreed by both parties.
PLN Decree No.0289/2013 Regarding Land Acquisition for the Purpose of Providing Electricity, Operational Costs of Land Acquisition and Operational Cost of Compensation[11].	Covers (i) direct land acquisition to be used for tower siting, major electricity main substation, network, transmission, distribution, power plant, office, etc. by giving compensation; and/or (ii) indirect land acquisition for creating free space by giving compensation on the land crossed by electricity network and transmission and by giving compensation on the plants and buildings.

[11] PLN.2013. *Keputusan Direksi PT PLN (Persero)/Nomor:0289.K/DIR/2013 Tentang Pengadaan Tanah Untuk Kepentingan Penyediaan Tenaga Listrik Biaya Operasional Pengadaan Tanah Dan Biaya Operasional Kompensasi Di Lingkungan*

42. Based on the assessment of the current PLN practices, as a corporate entity, PLN adopt and comply with the *PERMEN* 05/2012 on the conduct of environmental assessment in securing the environmental clearance for construction of power plant, main substation and transmission network as well as with other laws and regulations related to solid wastes, hazardous wastes, pollution control, forest management, environmental monitoring and reporting, information disclosure, and community involvement. For distribution network activities where the requirement for environmental impacts assessment are not covered by GOI's legal framework (i.e**.** *PERMEN* 05/2012)**,** environmental mitigation measures are specified in Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 on Construction Standard for Low Voltage Power Network[12] and PLN Decree No.606/2010 on Construction Standard for Medium Voltage Power Network[13], PLN Decree No.605/2010 on Construction Standard for Power Distribution Substation and Switching Substation which are then implemented**.** PLN implements good practices on managing environmental impacts such as meaningful consultation (socialization), provision of waste storage and segregation, and use of environmentally accepted equipment such as non-polychlorinated biphenyls (PCB) transformers. To address the potential risks on workers' health and safety, SMK3 (*Sistem Manajemen Kesehatan dan Keselamatan Kerja* or occupational health and safety management system) was established by PLN respectively for transmission, main substation and distribution, which is well implemented.

43. **Grievance Mechanism.** PLN has a well-established management system in handling any grievance/complaint from public that all over the country, namely Call Center 123 and front line i.e customer services. Through *Call Center 123* which can be accessed by anyone anywhere in Indonesia through website, email, telephone and social media (e.g. facebook, twitter); *Wilayahs* immediately act on community complaints including those related to construction impacts, environment, community health and safety, and social issues, by deploying PLN technical service responders.

[12] PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:473.K/DIR/2010 Buku 3 – Standar Konstruksi Jaringan Tegangan Rendah Tenaga Listrik*

[13] PLN.2010. *Lampiran Keputusan Direksi PT PLN (Persero)/Nomor:606.K/DIR/2010 Buku 5 – Standar Konstruksi JaringanTegangan Menengah Tenaga Listrik*

Figure 3. PLN Call Center 123 accessibility

44. There is a monthly record for all grievances and complaints sub-grouping into type issues (i.e. power outage, location of poles) and also reports on outstanding issues. The role of *Area* is to verify the issues and resolve the grievances/complaints within 24 hours referring to their standard operational procedure. Grievances or complaints from communities could be related implementation of the construction during and post construction.

45. Monthly report from the Call Center 123 summarizes the complaint handling performance (e.g. number of power outage, resolution of complain, outstanding issue etc.) that become one of the data to calculate and SAIDI and SAIFI of the *Wilayahs*. Once compiled, the information will be uploaded into SILM. One of section in SILM is for the environmental management performance including social issues.

Information Disclosure, Consultation and Participation. A preliminary consultation on the proposed framework of ESSA took place in PLN HQ, Jakarta on September 7th and 9th, 2015; PLN HQ and *Wilayah*s staffs involved in design, construction, supervision, maintenance in distribution, as well as PLN Headquarter Environmental Unit consulted on the preliminary findings of the assessment, the strengths, risk and proposed action plan. Inputs from the consultation were included in the action plan.

Draft ESSA has been disclosed on October 16, 2015 at the Infoshop (English version) and PLN web sites (Indonesian version). The first public consultation of draft ESSA took place in Bandar Lampung on Oct 19th, 2015, subsequently on Nov 3th and 5th, 2015 it was held in City of Banda Aceh and Tanjung Pandan (Belitung Island) respectively. Two more consultations were in Palembang (South Sumatra) on Dec 10 then Padang (West Sumatra) on Dec 11. Representatives of various local governments (provincial, district/city level) agencies, local universities, communities/ethnic groups and civil society participated the public consultation. In each consultation, Bank staff presented detailed information on the PforR process, the proposed

Power Distribution Development Program, the key findings and recommendations of the ESSA. Representatives of indigenous groups also participated in the public consultation and voiced that the program should benefit and bring positive impacts to the groups. They encourage PLN to provide electricity access to all citizens and request the PLN not to ignore their existence. The groups also mentioned that they have been waiting for electricity connection for long time and will participate in consultation process prior to the construction to reach consensus on how the Program will be implemented.

Inputs received during consultations were positive toward the Program implementation though some criticized poor service quality of the PLN (notably was the outage). Inputs/feedback from these consultations are included in the Annex of the final version of the ESSA.

Summary of the Environmental Management Process in the Program.

Table 4 describes implementation procedure including environmental management in the distribution extension execution.

Table 4. Main processes of the Program implementation and environmental management

Process	Tasks	Timing and Phase	Responsible Parties
Planning and design	− Distribution extension designs plans (RUPTL) are prepared	Annual	RUPTL by PLN HQ PLN *Wilayah*
Preparation	− Screening to exclude high risk activity (e.g. distribution extension within or adjacent the protected areas/forest area) − Permits request to particular agencies (e.g. for trimming/cutting of trees from authorized district/city agency or owner, construction permit (IMB) and principle permit from district/city agency).	Annual Annual and As necessary	PLN *Wilayah*
Decision process	− Permits are granted	Implementation	Relevant agencies in district/city government
Bidding documents and selection of contractors	− Bidding documents are prepared and health, safety and environmental provision are included into bidding documents. − Contractors selected, signed of contracts	Implementation	PLN *Wilayah*
Execution	− Construction implementation by contractor, material is supplied by MDU (Material Distribution Unit) in *Wilayahs*	Implementation	PLN *Wilayah* requests material from SCM, Contractor selected by PLN *Wilayahs*
Reporting	− Contractors report for deliver the work as per contract provision − Contractors must inform the final clean up and restoration of the site as necessary	Implementation	Contractor

3.3 Program Capacity in the Environmental Management - Performance Assessment

46. **Regulatory Framework:** The *PERMEN* 05/2012 covers the activities that requires full environmental assessment (Category A as per OP 4.01) and partial EA. The GOI's environmental screening as per *PERMEN No. 05/2012, Appendix 1* uses a prescriptive list with thresholds of proposed activity whereas Bank screens based on the significance of impacts. The program will adopt screening criteria to exclude the activities located in or directly adjacent to protected areas. The GOI legal framework exempts distribution line projects from environmental

assessment requirement. Therefore an environmental assessment is not conducted for installation of distribution line.

47. **Environmental instruments:** For construction of distribution lines, the PLN Decree No. 473/2010 on Construction Standard for Low Voltage Power Network, PLN Decree No.606/2010 on Construction Standard for Medium Voltage Power Network and PLN Decree No.605/2010 on Construction Standard for Power Distribution Substation and Switching Substation has adequate measures to ensure impact on environmental is minimized.

48. **Monitoring and Supervision:** *Wilayah* conducts regular[14] environmental monitoring during construction of distribution lines. *Wilayah* submits to PLN HQ a quarterly report (*K3-L*[15] *Activity Report*) which includes the result of the monitoring of implementation of SMK3 and environmental and social issues, if any.

49. **Staffing and Training:** The HQ staff is responsible for policy matters whilst the staff in *Wilayah* is responsible for the delivery. K3-L Division Staff especially who handle environmental and social safeguards, have four fulltime staff. Their role is to monitor and evaluate environmental and social safeguards issues all over the country. PLN has long experience in dealing with World Bank safeguards policies. PLN has implemented Bank projects in the past and its staff has received sufficient training over time on the Bank's environmental and social safeguards policies and their implementation. Within PLN itself, to improve the quality of staff the Education and Training Center of PLN provides trainings (including training on environmental and resettlement safeguards) two times in a year. All staff is entitled to select and attend the trainings.

50. **Grievance Mechanisms:** See *Para* 44

51. **Coordination within PLN:** the PLH HQ in charge for K3-L coordinates very closely with the staff at *Wilayah*s level. Internal meetings among the staff of PLN HQ and *Wilayah*s are performed in regularly basis. In the proposed action plan, some measures will be included to increase effectiveness in the environmental coordination and increase digital reporting (e.g. SILM) and communication. These actions will be especially important as part of the capacity building program for staffs at PLN *Wilayahs* to implement the environmental best practices in their works program.

3.4 Relevance with the Principles of OP 9.00

52. This section presents the assessment of the extent to which the applicable environmental and social systems are consistent with the core principles and attributes of PforR. It is also necessary to indicate the willingness of the PLN to undertake the necessary measures to improve environmental and social system performance in key areas.

[14] Environmental monitoring is conducted twice a year, measuring of ambient air quality, surface water quality, and noise levels, the quantities of hazardous waste generation are also monitored. Environmental monitoring reports are submitted to environmental agency (BLH/BPLHD) semi-annually.

[15] K3-L electricity safety, occupational health, safety and environment

53. **Relevance of the Program and exclusion criteria for PforR support.** The PforR type of lending excludes the support of projects with significant and irreversible impacts (Category A). The Program does not involve investments in construction of power generation, transmission, main substation or other distribution activities that are within or adjacent to protected areas (as per *PERMEN* 05/2012, Article no 3) would require AMDAL.

54. **The Program system and its relation to the PforR core principles and key elements (attributes).** PLN HQ and *Wilayahs* have in general good environmental management practices and the country appropriate environmental regulations. There are areas for improvement particularly in making sure that measures to protect community and workers health and safety during construction are strictly practiced and enforced. The Program system is consistent with the core principles and key elements (attributes) of OP9.00.

55. **Significance of Gaps.** This assessment concludes that these gaps do not pose a risk to the achievement of Program results, provided the client commits to the implementation of the agreed Program Action Plan (PAP).

56. **Borrower willingness to implement measures to improve systems performance.** Further discussions about the PAP have revealed PLN commitment in implementing recommendations and improve environmental, health and safety performance. The budget of the Program Action Plan will be disbursed through the PLN annual budget.

4 SOCIAL MANAGEMENT SYSTEM

57. Social issue management in Indonesia system in generally divided into two areas, i.e. social issue related to land acquisition and non-resettlement social issue. The later issue is generally covered under the environmental impact assessment while for the land acquisition is covered under separated document called LARAP.

58. PLN does preliminary survey with meaningful consultation. Socialization of the project plan includes consultation that may affect to non-land assets (in general is a few of trees) and agreement from land owners for use of land in case poles need to be located on private land and removal or cutting down the affected trees. It is usually sufficient to obtain a verbal agreement from the landowners.

4.1 Institutional responsibilities

59. Both environmental impact assessment and LARAP is prepared by project proponent. The environmental impact assessment which includes social impact assessment beyond the resettlement issue should obtain clearance from the regional office of environmental agency (BLH/BPHD), while the LARAP will follow the provision of Law No 2/2012 on land acquisition for development of public interest. The Law No 2/2012, the land acquisition will require the project proponent to carry out feasibility study to assess the feasibility of the proposed sites from technical, cost/finance, environmental and social matters, and among the institutions involved in LARAP process are Land Agency (BPN), relevant agencies within city/district government (including the village level). Land acquisition for less than 5 ha, as stipulated in Presidential Regulation No 40 of 2014 can be obtained by direct purchase by the project proponent on the basis of business to business thus LARAP document is not required. Application of this procedure will be a common practice in this program because all of the land acquisition for each switching substation will be much less than 5 ha. The *Wilayah* will be responsible for acquiring land for the switching substation Prior to the Program implementation in the proposed area, *Wilayah* will also have to get concurrence from local communities and principles permit (i.e. location permit).

4.2 Description of the regulatory framework

60. Currently, the Government of Indonesia has few legislation relating to land acquisition to be carried out for projects of public interest (Law No. 2 of 2012; Presidential Regulation No. 71 of 2012); and technical guidelines issued by the relevant ministries[16]). Refer to Presidential Regulation No. 40 of 2014 land acquisition for less than 5 Ha can be executed with direct purchase or land swab or other forms as agreed by both parties.

61. These law and regulations cover the land acquisition required for "development of public interest" which is assigned to state-owned enterprises by the government. Land acquisition for the purpose of providing electric power which is not based on the assignment given by the government shall be regulated by PLN Decree No.0289/2013 Regarding Land Acquisition for

[16] Regulation of Head of BPN No. 5 of 2012 concerning with technical guideline for implementation of land acquisition for public purposes.; Regulation of Ministry of Home Affair No. 72 of 2012 concerning with operational and supporting cost for implementation of land acquisition for public purposes uses *APBD* (local budget); Regulation of Ministry of Finance No.13/PMK.02/2013 concerning with operational and supporting cost for implementation of land acquisition for public purposes uses *APBN* (state budget).

the Purpose of Providing Electricity, Operational Costs of Land Acquisition and Operational Cost of Compensation[17]. *PLN Decree No. 0289/2013* covers (i) direct land acquisition to be used for tower siting, major electricity main substation, network, transmission, distribution, power plant, office, etc. by giving compensation; and/or (ii) indirect land acquisition for creating free space by giving compensation on the land crossed by electricity network and transmission and by giving compensation on the plants and buildings.

4.3 Program Capacity in the Social Area and Performance Assessment

62. Program capacity and performance in the social area appears to be generally good, based on the above and the gap analysis carried out in Section 5 below. The evaluation is based on the review of the relevant regulatory framework, analysis of internal procedures of PLN, and field visits to alignment of distribution lines include the existing switching substation. Again health and safety of the communities and workers during construction needs to be improved and environmental health and safety measures need to be practiced and strictly enforced all the time.

63. It is assessed that there are no significant gaps between program practices and principles and elements of the OP 9.00; however, there are few areas that could be strengthened, as detailed below.

4.4 Relevance to the Principles of OP 9.0

64. This section presents the assessment of the extent to which the applicable environmental and social systems are consistent with the core principles and attributes of PforR. According to the Guidelines of PforR, it is necessary to provide a fair assessment if the Program system is consistent with the core principles and attributes of OP 9.00. It is also necessary to indicate the willingness of PLN to undertake the necessary measures (Action Plan) to improve environmental and social system performance in key areas.

65. **Relevance of the Program System and exclusion criteria for PforR support.** The PforR type of lending excludes the support of projects with significant and irreversible impacts (Category A). The Program only develop distribution lines and does not allow the Program activities on protected area/forest or forest area and affect to physical or economic displacement that would normally be considered environmental risk Category A under conventional investment lending criteria.

66. **The Program system and its relation to the PforR core principles and key elements (attributes).** PLN applies general good environmental and social management practices and the country relevant land acquisition regulations. The Program system is consistent with the core principles and key elements (attributes) of OP 9.00 see details on Section 5 and 6.

67. **Significance of Gaps.** This assessment concludes there are no significant gaps and no pose a risk to the achievement of Program results.

[17] PLN.2013. *Keputusan Direksi PT PLN (Persero)/Nomor:0289.K/DIR/2013 Tentang Pengadaan Tanah Untuk Kepentingan Penyediaan Tenaga Listrik Biaya Operasional Pengadaan Tanah Dan Biaya Operasional Kompensasi Di Lingkungan*

68. **Borrower willingness to implement measures to improve systems performance.** Para 76 has Further discussions about the Program Action Plan have revealed PLN's commitment in implementing recommendations (see Section 6). The budget of the Program Action Plan will be funded by PLN budget. The assessment was carried out by:

i) **Document reviews** on GOI's laws and regulations pertaining to safeguards, PLN's guidelines and guidance related to activities under the program scope and safeguards, and other PLN's documents such as Call Center 123 reports, SILM on environment including social issues.

ii) **Meetings and extensive discussions** with key PLN staff handling safeguards both from headquarter (HQ) and *Wilayahs* in West Sumatera, North Sumatera, South Sumatera, Bangka Belitung, Lampung, Aceh, and Riau;

iii) **Field sites** at existing switching substations and distribution lines (poles and its transformer) in Padang on May 18-19, Palembang, Medan and Tanjung Pinang(Bangka Belitung)) consecutively on July 31 – August 4, 2015, included interview with field staffs and the contractor for operation and maintenance.

69. Main meetings included (i) a meeting held on 24 April 2015 in Medan with representatives of PLN HQ and regional units to share the views on the findings during the field visit in North Sumatra province; (ii) a meeting held on 7 May 2015 in Pekanbaru with representatives of PLN HQ and regional offices/units to obtain their views, suggestions and recommendations on the preliminary assessment findings and proposed actions to address gaps; (iii) a preliminary consultation meeting held on 22 May in Jakarta with representatives of PLN HQ to obtain their opinions on the first draft ESSA; and (iv) a wider consultation meeting held on 19 June 2015 in Jakarta convening PLN HQ and regional offices/units in Sumatra to obtain their views, suggestions, and recommendations on the draft ESSA.

5 ASSESSMENT OF PROGRAM SYSTEM

70. Table 5 summaries the PDDP evaluation of the environmental and social systems with the principles and attributes of the Operational Policy for Program for Results 9.0. It also indicates the gaps identified during the evaluation process.

Table 5. Evaluation of the PDDP Environmental and Social Systems and its relation to the OP 9.00[18] from the World Bank.

General Core Principle: **Environmental and social management procedures and processes are designed to:** • **promote environmental and social sustainability in program design;** • **avoid, minimize or mitigate against adverse impacts;** • **promote informed decision making relating to a program's environmental and social effects**		
Key Elements	**Program System**	**Gaps**
1. Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the program level.	The requirement for environmental impact assessment (AMDAL) has been initiated in 1982 (Law 4/1982 on Environmental Management and Protection that was then superseded by the Law No. 32/2009). Derivative of the Law No 32/2009 is Government Regulation (PP) No. 27/2012 on Environmental Permit that further emphasizes the need to prepare an environmental impact assessment documents (i.e. AMDAL or UKL/UPL) for business or activities that potentially results in environmental and social negative impact. The PP describes the requirements of AMDAL, UKL/UPL[19] or SPPL[20], the permitting process, outline of environmental documents' preparation, community involvement and public consultations, grievance redress mechanism, implementation and monitoring of management and mitigation measures to address significant negative impacts. To implement the PP requirement, few specific/technical guidelines were enacted, i.e. Ministry of Environment Regulations (PERMEN) No. 05/2012 on Type of Activities Requiring AMDAL, PERMEN No.16/2012 on Guidelines for Preparation of Environmental Documents, PERMEN No. 17/2012 on Guidelines for Public Participation in AMDAL Process On natural habitat and physical cultures resource, Presidential Decree No. 32/1990 on Management of Protected Area and Law No. 11/2010 on Physical Cultural Resources regulate the procedures and	No significant gaps

[18]Program for results financing, The World Bank http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTRESLENDING/0,,contentMDK:22748955~pagePK:7321740~piPK:7514729~theSitePK:7514726,00.html

[19] UKL-UPL pertains to the management and monitoring efforts of business/activities that have no significant impacts on the environment, which are necessary for the process of the decision making regarding the implementation of the business/activities.

[20] SPPL is a statement regarding the undertaking to monitor and manage the environmental impact of business/activities which are exempted from the AMDAL or UKL-UPL requirement.

	mechanism for the preservation of protected area and physical cultural resource. On hazardous waste and pollution control, the country has ratified the Basel Convention and has its first regulation on hazardous waste management in 1994, the latest amendment was Government Regulation No. 101/2014 on Management of Toxic and Hazardous Waste. On public disclosure, Law No. 14/2008 on Public Information ascertains the public right for correct information on project and AMDAL process. On labor and occupational health and safety, Law No. 13/2003 on Manpower and subsequently Government Regulation No. 50/2012 on Practice of Health and Safety Management System warrant the right of worker for protection, health and safety to achieve optimal work productivity, and require implementation of health and safety system.	
2. Incorporate recognized elements of environmental and social assessment good practice, including:		
(a) early screening of potential effects;	*PERMEN* 05/2012 covers the activities or businesses that require full environmental assessment (Category A as per OP 4.01). The environmental screening as per *PERMEN* No. 05/2012 applies a prescriptive list with thresholds of proposed activity and potential adverse impact included. AMDAL is mandatory for business/ activities that is located in or directly adjacent to protected areas (i.e. protected forest, national park, critical habitats). The program will adopt screening criteria to exclude the activities located in or directly adjacent to protected areas.	Distribution activities is not covered by the PERMEN 05/2012, nevertheless PLN will include provision to exclude distribution works that are within or adjacent the protected areas
(b) consideration of strategic, technical, and site alternatives (including the "no action" alternative);	*PERMEN* No. 16/2012 on guidelines of EA document requires the assessment to consider alternatives such as technology, project sitting or alignment, equipment used, technical specification etc. PLN has implemented alternatives on location, re-route, equipment, technical specifications and other design considerations during selection and planning of a project.	No significant gaps
(c) explicit assessment of:		

• potential induced impacts • cumulative impacts	*PERMEN* No.16/2012 on Guidelines for Preparation of Environmental Documents stipulated scope and aspects to be assessed in AMDAL that among other should cover geo-physical-chemical, biological, and social-economic-cultural and impacts assessment of potential direct, indirect, cumulative and induced impacts and risks.	The GOI legal framework exempts distribution line projects from environmental assessment requirement. Therefore an environmental assessment is not conducted for installation of distribution line.
• trans-boundary impacts	No applicable to the program	No applicable
(d) identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized;	The identification of environmental impacts and preparation of the EMPs (RKL/RPL)[21] to address adverse impacts is provided in *PERMEN* No. 16/2012. The EMPs is parts of AMDAL documents (other are environmental impact statement (ANDAL), executive summary), it contains plans to prevent, control, and manage significant negative impacts to environment, as well as enhance the positive impact as a result of the business/activities. For Distribution, Decree of the Board of Directors of PLN (PLN Decree) No. 473/2010 on Construction Standard for Low Voltage Power Network, PLN Decree No.606/2010 on Construction Standard for Medium Voltage Power Network and PLN Decree No.605/2010 on Construction Standard for Power Distribution Substation and Switching Substation have included the mitigation measures to be taken to minimize environmental (health and safety) and social impacts during construction and operation of distribution lines. The mitigation measures include proper handling of excavated soil, minimum safety distance, appropriate selection of vehicle for transportation of poles, recovery of excavation site, adequate distance from other objects (1-6 m depending on the kind of the objects), etc. The contract of the civil works specifies the compliance of PLN Decrees No. 473/2010, No. 606/2010, No. 605/2010	No significant gaps. While the distribution lines construction impacts is well-managed and covered through the PLN Decrees.

[21] RKL: *Rencana Pengelolaan Lingkungan* (Environmental Management Plan) and RPL: *Rencana Pemantauan Lingkungan* (Environmental Monitoring Plan)

(e) clear articulation of institutional responsibilities and resources to support implementation of plans**;**	Government Regulation (PP) No. 27/2012 on Environmental Permit clearly mentions that the process of AMDAL and the responsibilities, of each institution (e.g. the proponent responsibility for preparation AMDAL, BLH/BPLHD for clearances following the recommendation from AMDAL Committee, etc.) The Program implementation will be the responsibility of *Wilayahs*, each *wilayahs* has unit in charge for environmental and social impact management.	.
(f) Responsiveness and accountability through:		
• stakeholder consultation, • Responsive grievance redresses measures.	*PERMEN* No. 16/2012 and *PERMEN* No. 17/2012 on Guidelines for Public Participation in AMDAL Process and Environmental Permit prescribe the requirements for community involvement and public consultation (socialization). For projects requiring AMDAL, public consultation from the AMDAL TOR preparation stage is mandatory. The community involvement during the process of AMDAL and the environmental permit should be based on the principles; (i) the provision of transparent and complete information; (ii) position of equality among the parties involved; (iii) fair and prudent dispute settlement; and (iv) coordination, communication and cooperation among the concerned parties. *PERMEN* No. 17/2012 also describes the grievance redress procedure for community complaints against a project. The procedure also outlines the methods and timeline for resolving complaints. For power distribution work and part of this ESSA process, The Bank and PLN has agreed to arrange a meaningful consultation with the relevant stakeholders including representative of potential affected communities prior to the commencement of the Program. The public consultation will also inform that the complaint handling mechanism via (a) Call Centre 123; and (b) front line i.e. customer services (CS) (some wilayahs have discouraged to use CS counter). The complaints to the Call Center 123 would be recorded and divided in three subjects: 1) Technical, 2) Customer services (commercial), and 3) Other (including environmental and social safeguards matters).	No significant gaps.
• timely dissemination of program	Government Regulation No. 17/2012 requires the disclosure of	For distribution lines,

information	environmental documents (both draft and final versions including EMP) to stakeholders including affected people. Before preparing environmental documents, a project proponent shall provide a general project concept note project (e.g. name of proponent, project title, type, scale, and location of business/activities potential impacts and proposed impact mitigation measures). One agreed, the project proponent shall publish the information at public accessible media, e.g. printed media such as national/local newspaper or electronic media through television, website, social media, text message, and/or radio. Shall there be any comment, it should be delivered to environmental agency (via phone, letter, email, etc.) within 10 working days. When the environmental agency issues an environmental license, within 5 days after the issuance, disclose the documents and announces the issuance in a form of mass media and/or multimedia including website that can be accessed by the public effectively and efficiently. Under Law No. 14/2008 on Public Information, everyone has the right to obtain public information, attend public meetings, request copies of public information through an application, and/or disseminate public information.	environmental assessment is not disclosed because the assessment is not required

Environmental Core Principle. 1 **Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.**		
Key Elements	**Program System**	**Gaps**
As relevant, the program to be supported:		
• Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.	*PERMEN* No. 05/2012 on Type of Activities Requiring AMDAL is based on a prescriptive screening process to determine whether projects are required to conduct an AMDAL and secure an environmental license from the environmental agency.	No significant gaps

	Under PERMEN No. 05/2012, AMDAL is required for transmission (above 150 kV) and main substation (above 150 kV) but **not for distribution.** *PERMEN* No. 05/2012, however as stipulated in Article 3 requires AMDAL for any business/activities in or directly adjacent to protected areas	
▪ Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities**.**	The GOI has ratified international regulation on biodiversity through Law No. 05/1994: United Nation Convention on Biodiversity. The Law requires the environmental assessment of proposed projects likely to have significant impacts on biological diversity with a view of avoiding or minimizing such effects. *PERMEN* No. 05/2012 Article 3 requires AMDAL for any activities in or directly adjacent to protected areas. Furthermore, Presidential Decree No. 32/1990 on Management of Protected Area stipulates that; (i) in protected areas, cultivation, which interferes with the environmental function of the protected area, is prohibited; and (ii) in nature reserves and areas of cultural heritage, cultivation, which alters the landscape, land use conditions, natural ecosystem, or environmental function of the nature reserves or cultural heritage, is prohibited. Extension of distribution lines are all in community areas, and shall it be located in protected areas or directly adjacent to protected, the environmental screening will exclude the proposal to be funded by the Program.	No significant gaps.
▪ Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects.	Law No. 11/2010 on Physical Cultural Resources defines the criteria, procedures and mechanism for cultural heritage preservation. Culture heritage site is considered as protected areas as per the *PERMEN* No. 05/2012, therefore full environmental assessment (AMDAL) will be required. Distribution are all in community areas and *Wilayahs* have been carrying out similar programs over the years and have adequate capacity in managing the distribution construction work envisaged under the Program. This includes knowledge to avoid	No significant gaps

	adverse impact on the physical culture resource (e.g. mosques, burial sites, historical sites, etc.)	

Environmental Core Principle. 2

Environmental and social management procedures and processes are designed to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or promoted under the program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Key Elements	Program System	Gaps
▪ Promotes community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections, or remedial works incorporated as needed.	Law No. 13/2003 on Manpower stipulates the obligation of all company to practice health and safety management and to integrate the aspect into the company management system. For the implementation of health and safety system, the Government Regulation No. 50/2012 on Practice of Health and Safety Management System has been issued. Worker and communities health and safety is the first and foremost in any PLN project implementation. To address the potential risks on workers' health and safety, SMK3 (*Sistem Manajemen Kesehatan dan Keselamatan Kerja* or occupational health and safety management system) was established by PLN respectively for transmission, main substation and distribution, which is well implemented. Performance of occupational health and safety and safeguard compliance are reported quarterly through the online system (i.e. SILM, *Sistem Informasi Laporan Managemen*-- or Information System for Management Report).	No significant gaps

▪ Promotes use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated through program construction or operations; and promotes use of integrated pest management practices to manage or reduce pests or disease vectors; and provides training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with international guidelines and conventions.	Law No. 32/2009 on Environmental Protection and Management, Article 3 mentions that EMPs shall aim to prevent Indonesia's territory from the environmental pollution and/or damages, control the natural resources usage and establish the sustainable development. Government Regulation No. 101/2014 on Management of Toxic and Hazardous Waste details the procedures for proper management of hazardous waste, it adopts the principle of "cradle to grave" starting from waste identifying, reducing, storing, collecting, transporting, utilizing, processing to final disposal of hazardous wastes. Used transformer oil is classified as hazardous waste. While the PLN has the license to temporary store the hazardous waste, for final disposal/treatment, it has agreement with the third party who has the valid license to manage the hazardous waste In addition to hazardous waste management, *PERMEN* No.16/2012 stipulated that the principle of prevention of pollution and prevention of damage to the environment needs to be considered through environmental assessment and applied in the context of environmental management. Site visit to the distribution warehouse found SOP for hazardous waste handling (i.e. used transformer oil) has not been implemented properly by the *Wilayahs*	There are gaps. There is a need of capacity building activities to reiterate the important of hazardous waste management as per the PLN Standard Operating Procedure (SOP)
• Includes measures to avoid, minimize, or mitigate community, individual, and worker risks when program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.	The main natural hazards are floods, earthquake (and tsunami) and landslides. The island of Sumatra is at the boundary between two tectonic plates. The ocean floor southwest of Sumatra is part of the Indian/Australian plate, while Sumatra and the other islands of Indonesia and Thailand are part of the Eurasian plate. Current health and safety regulations and environmental management within PLN regulations requires contractors to have life policies. Distribution are all in community areas and *Wilayahs* have been carrying out similar programs over the years and have adequate capacity in managing the distribution construction work envisaged under the Program. For example, for construction of	No significant gaps

	switching substation, the *Wilayahs* has sufficient information to avoid areas prone to flood.	

Social Core Principle. 1 **Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.**		
Key Elements	***Program System***	***Gaps***
▪ The program avoids or minimizes the adverse impacts of land acquisition.	Program activities normally occur within the right of way of existing roads. When it occurs on private land, PLN's practice is to minimize the siting of concrete poles on private lands and to avoid disturbance of non-land assets to the maximum extent possible or else to obtain APs' concurrence well in advance during the planning stage for the use of private land for utility poles and removal of non-land assets	There are no significant gap
▪ The program identifies and addresses economic and social impacts caused by land acquisition, including those affecting people who may lack full legal rights to assets or resources they use or occupy.	The Program will not affect to physical displacement that leads to loss of income-generating opportunities or employment.	This element does not apply to the Program.
▪ The program provides compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land.	Land acquisition for switching substation (around 6x8 m^2) is paid prior the construction with the norm of willing buyer willing seller	There is no significant gap. Direct purchase based on business to business
▪ The program provides supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity.	The Program will not affect to physical displacement that leads to loss of income-generating opportunities or employment	This element does not apply to the Program
▪ The program restores or replaces public infrastructure and community services adversely affected.	Program is not likely to affect public infrastructure or community services, but, if these impacts occurred, the construction contractor would replace or repair the affected infrastructure	There are no significant gap

Social Core Principle. 2 **Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.**		
Key Elements	***Program System***	***Gaps***
▪ If Indigenous Peoples are potentially affected, the program (i) consults with them, and (ii) ensures that they benefit from exploitation of customary resources or indigenous knowledge.	The Program will not give negative impact to communities of Indigenous People. The Program should be open to all citizens as well ethnic group or indigenous people as beneficiaries of the Program. Prior consultation and information of the Program will be conducted before construction. Without mutual agreement, the Program cannot be implemented in the area.	There are no significant gaps.
▪ The program gives attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups.	The Program would cover urban and rural in area already electrified and it would also cover the lowest income households as beneficiaries.	There are no significant gaps.

6 INPUTS TO THE PROGRAM'S ACTION PLAN

6.1 Main Inputs to the Program Action Plan

71. Based on the Program Environmental and Social System Assessment, gaps identify with the OP 9.00, data collected during site visits conducted to proposed Program and consultations held with PLN staff at HQ and *Wilayahs*, the following measures are proposed to improve the performance of the environmental and social management system of the Program.

72. The proposed environmental and social measures will become part of the Program Action Plan (PAP). These inputs to the PAP include key actions that should be undertaken to enhance Program's environmental and social systems. Besides, the Proposed Action Plan includes recommendations from consultation activities, (i) discussion with PLN HQ and *Wilayahs* staff in charge of the environmental and social management and supervision of the Program, during the July and September 2015 mission and ii) public consultations with stakeholders conducted in 5 Wilayahs..

Table 6. Environmental and Social Measures for the Program Action Plan.

Environmental and Social Actions	Indicator	Timing	Responsible
Screening Develop an initial screening form that the Program will not i) be located in or adjacent to the protected area/forest or forest area, ii) affect to physically displaced person/households or economic displacement and iii) impact to indigenous peoples	Statement letter issued by each Wilayah in the proposed annual workplan to PLN HQ → as Legal Covenant	Annualy	**PLN HQ**
Capacity Building - Training for the 7 *Wilayah*s to understand the screening form. - Training for hazardous waste and used transformer oil or spillage management (B3) SOP to 7 *Wilayahs* - Training for contractors in 7 ***Wilayahs*** for good construction management practice (including environmental health and safety)	Training reports	Before loan effectiveness	**PLN HQ**

73. Monitoring Plan: The PLN Environmental Unit at HQ will prepare bi-annual reports to the Bank to inform about progress in the implementation of the Program Action Plan and Program monitoring.

74. Digital database (SILM) at *Wilayahs* is able to i) monitor the progress of environmental performance (i.e. environmental permitting process (e.g. AMDAL, UKL/UPL), implementation of environmental management and monitoring plans, etc), ii) record complaint handling, health and safety issues. During the preparation of the program, PLN staffs both at HQ and *Wilayahs* have demonstrated how the SILM works to task team.

6.2 ESSA Consultation and Disclosure

75. A preliminary consultation on the proposed framework of ESSA took place in PLN HQ, Jakarta on September 7th and 9th, 2015; PLN HQ and *Wilayah*s staffs involved in design, construction, supervision, maintenance in distribution, as well as PLN Headquarter Environmental Unit consulted on the preliminary findings of the assessment, the strengths, risk and proposed action plan. Inputs from the consultation were included in the action plan.

76. Draft ESSA has been disclosed on October 16, 2015 at the Infoshop (English version) and PLN web sites (Indonesian version).

77. The first public consultation of draft ESSA took place in Bandar Lampung on Oct 19th, 2015, subsequently on Nov 3th and 5th, 2015 it was held in City of Banda Aceh and Tanjung Pandan (Belitung Island) respectively. Two more consultations were in Palembang (South Sumatra) on Dec 10 then Padang (West Sumatra) on Dec 11. Representatives of various local governments (provincial, district/city level) agencies, local universities, communities/ethnic groups and civil society participated the public consultation. In each consultation, Bank staff presented detailed information on the PforR process, the proposed Power Distribution Development Program, the key findings and recommendations of the ESSA. Inputs received during consultations were positive toward the Program implementation though some criticized poor service quality of the PLN (notably was the outage). Inputs/feedback from these consultation are included in final version of the ESSA

78. The final ESSA in both English and Indonesia will be disclosed on January 8, 2016 before negotiations begin.

7 ENVIRONMENTAL AND SOCIAL RISKS

7.1 Potential environmental and social risks

79. Although the *Wilayah*s have been carrying out similar programs over the years and are experienced and capable of managing the distribution construction work under the program, capacity of environmental and social management of the *Wilayah*s should be maintained and strengthened, as staffs moving in and out of PLN safeguard department are common. The capacity of the *Wilayahs* to monitor and enforce environmental health and safety measures in the contracts will need to be strengthened. Finally, the capacity of contractors to practice and implement health and safety measures needs to be improved as well.

80. *Environment*. The main identified environmental risks are: (i) risk of not applying the initial environmental and social screening resulting e.g. adverse impact on the protected/forest areas; (ii) risk of inadequate environmental supervision (e.g. Used transformer oil or oil spillage management, health and safety measures); (iii) risk of contractors poor environmental and social performance. The Program Action Plan includes actions to reduce these risks and ensure good environmental management, transparency and stakeholder communication. In general, the positive impacts that the program are expected to generate include benefits to the overall economy, improvements to the access to electricity for about 3 million people. While potential adverse environmental and social impacts from the construction activities are low and are manageable through the technical guideline of PLN Decrees on construction of distribution lines, there is risk however if enforcement of provisions in the contract is weak that results in complaint. Capacity in environmental and social management particularly in *Wilayah*s should be maintained through regular capacity building program.

81. The PLN HQ will evaluate carefully any proposed distribution activities crossing critical and natural habitats to ensure any work in those areas will be screened out.

82. **M**ain pollution risks are related to management of used transformer oil and oil spillage that are classified as hazardous wastes as per the Government Regulation 101/2014 on Hazardous and Toxic Waste Management (B3 waste). Each PLN Wilayah has established Workshop of Electricity Maintenance that has the license from Ministry of Environment and Forestry to temporary store the B3 waste before it is handed over to licensed contractor for final disposal. Most of these risks and effects of the Program can be prevented and mitigated with proper environmental management actions, increasing environmental support and supervision, implementing the measures of proposed Action Plan and updating of the environmental manual. The SILM requires each *Wilayah* to provide information on B3 waste balance quarterly; this is to track volume of B3 waste that is temporary stored and has been transferred to the licensed third party for final disposal, recycled or destruction.

83. *Social*. The social risks associated to the Program are low; they stem from area of risk is unfairness in plants/crops acquisition compensation. This risk is addressed through the Program Action Plan.

7.2 Past project performance track-record on safeguards

84. The World Bank has partnered with PLN for energy project for several decades. PLN has been implementing many power sector projects funded by multilateral agencies for over 20 years; the projects include the existing WB funded *Upper Cisokan Pumped Storage Hydro-Electrical Power*, Indonesia *Power Transmission Development Project* (IPTD) and *Second Power Transmission Development Project* and many others. The PLN has experience and has acquired sufficient knowledge in managing environmental and social safeguards issues. And in regular basis, to enhance its staff capacity, both staffs from PLN HQ and *Wilayahs* are given opportunities to attend trainings (including training on environmental and resettlement safeguards) provided by the Education and Training Unit of PLN Corporate (*Pusdiklat*) twice per year.

7.3 ADB involvement in the Program

85. The Asian Development Bank (ADB) has prepared and negotiated a Results Based Loan (RBL) of US$600 million to PLN. The ADB RBL instrument is very similar to the PforR. The RBL will support PLN's transmission and distribution expenditure program over the 2015-2019 period in Sumatra region. Thus, both ADB and the Bank are proposing to provide parallel financing for the same distribution program in Sumatra over the same period. The only difference in program coverage is that of the US$600 million ADB Loan about US$180 million will be used to support prior results of the transmission component of the RUPTL; otherwise the Disbursement-Linked Indicators (DLIs), the implementation, monitoring and evaluation arrangements have been successfully harmonized through consultations and information sharing during the preparation process. ADB has also signaled to the Bank their intention to adopt the principle of third party verification of results that will be used for the PforR.

7.5 Evaluation of the Environmental and Social Risks

86. The Table 7 summarizes the environmental and social risks associated to the Program:

Table 7. Global risk assessment of the Program.

Risks	***Valuation***	
	Environment	***Social***
Environmental and social effects associated to the program activities	Low	Low
National environmental and social context	Low	Low
Strategy and sustainability of the program	Low	Low
Local capacity and institutional complexity	Low	Low
Reputational and political risk	Low	Low
Global evaluation	Low	Low

8 INPUTS TO THE PROGRAM IMPLEMENTATION SUPPORT PLAN

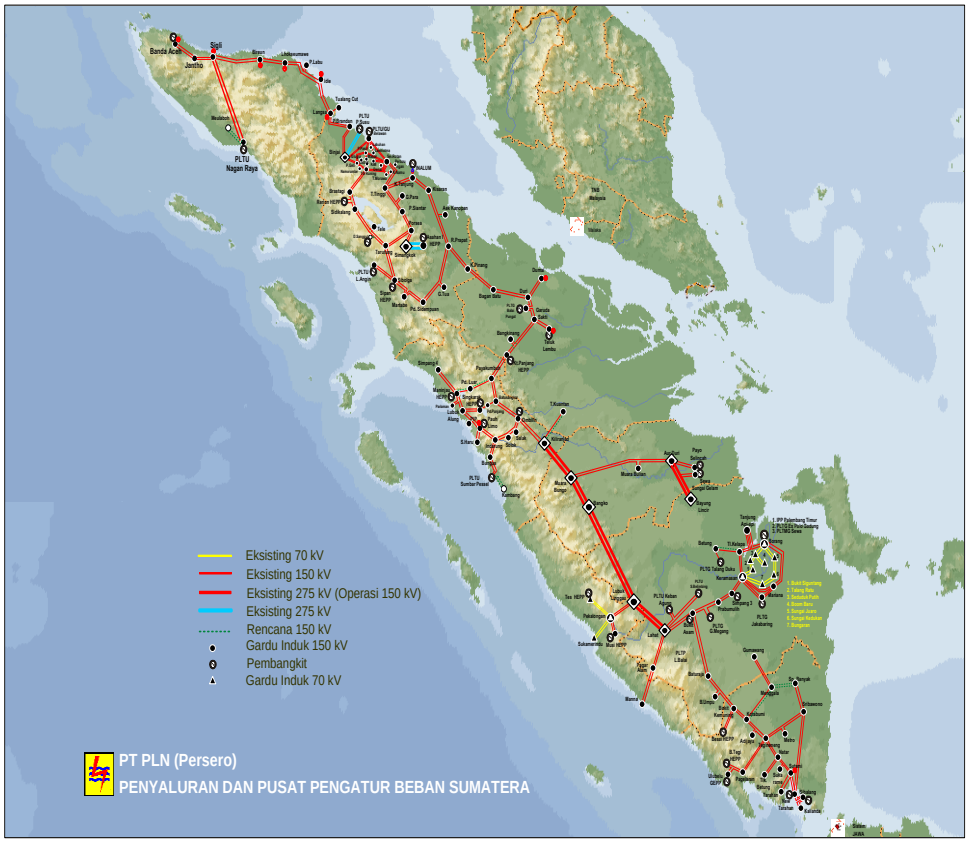
87. The Table 8 indicates the environmental and social activities to be undertaken within the Program Implementation Support Plan.

Table 8. Environmental and Social Support Plan for the implementation of the Program

Activity	Timing
Field visits to selected *Wilayah* and project sites - To review of grievance redress resolution (Environmental and social issues) - To review land transaction documentation (if any) - To review implementation progress of the environmental and social aspects of the action plan - To review the monitoring result of used transformer oil and spillage management	During Bank supervision missions: random sampling from i) PLN HQ for SILM reports; and ii) *Wilayahs* e.g. SILM reports on environmental and social management,, Call Center 123 Report including application of the screening process.
Support PLN on remedial action to improve PLN environmental and social system	During Bank supervision missions

Annex 1: Sumatra Island Power Transmission Maps (Existing and Future Development)

A. Existing interconnection system of Sumatra Island power



B. Future interconnection system of Sumatra Island power.

Annex 2: Forest areas (National Park, Protected Forest, Production Forest).

Annex 3

Public Consultation that has already been done

Draft ESSA of Power Distribution Development Program for Result

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
1	19 October 2015	*Wilayah* Lampung, in Lampung	45 participants: • PLN Headquarter • PLN *Wilayah* including Area and Rayon • Provincial agencies • Local university • NGOs	1. Demand for power is higher than available. 2. Quality of power supply is low with unstable voltage 3. Program should be able to support provincial government in tourism development, industrial estate and port development at west coast of Lampung 4. PLN is still slow in responding complaints	1. *Wilayah* Lampung will have new PLTU Sebalang to fill the shortage of electricity supply in Lampung. 2. This problem has been accommodated in Result Area 2, 3 and 4. 3. Principally PLN support economic development plan of district and provincial government. It has been discussed in coordination meeting with all districts/cities led by Governor of Lampung Province. 4. PLN always try to respond any complaints ASAP. But PLN needs to get clear location and the problem to follow up complaints received by Call Center 123, Area and Rayon.
				5. Trees to trees. How does PLN replace the forest trees? 6. How does PLN communicate if the activity will use private land?	5. Program will not cut forest trees and will not affect forest area 6. For the need of distribution poles PLN will do direct communication with the community to reach consensus or mutual agreement with land owners whether they agree PLN to install the poles on their land. For switching substation, around 48m^2 is needed and PLN will purchase on business to business basis.
				7. Real estate is easier to get electricity access than individual 8. The remaining supply is just 23 MW. How does PLN develop new program	7. PLN has same treatment or service to customers 8. Wilayah will have new power plant that can supply the shortage in near future

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
				9. Provincial government support Program as well public	9. PLN will coordinate with provincial government to determine priority locations.
				10. Why IP seems to be avoided in the Program? What will PLN respond if IP or ethnic group wants to have access to electricity?	Refer to SOP, electricity is public goods that everyone has the same right in accessing it. PLN does not favor or avoid any group. PLN always provides information and consultation with candidates of beneficiaries prior construction. PLN needs agreement with the community and to understand the aspiration of the community if the Program will be implemented in the area. Without mutual agreement PLN cannot continue the Program and will move to another location.
2	3 Nov 2015	*Wilayah* Aceh, in Banda Aceh	51 participants • PLN Headquarter • PLN *Wilayah* including Area and Rayon • Provincial agencies • Local university • NGOs • Journalist	1. How PLN valuate productive or big trees? 2. Some poles looks lack of maintenance for instance overload, tilted, number of outages 3. Some poles have not been moved by PLN because of road widening program 4. Is possible for the Bank t for developing potential new energy geothermal. Aceh has good resources for geothermal	1. Wilayah uses local market while to replace greening trees (within the RoW) owned by district/city, PLN will replant with similar trees. 2. Wilayah will pay attention on that issue. Overload burden of the transformer would be part of the Program activities. Maintenance work is associated with the system itself. If the large system in North Sumatra has disruption then the smaller systems in the NAD will be disrupted as well. In Result Area 2&3 will improve outage management and additional distribution transformer unit 3. Any project actually should allocate relocating budget for affected utilities including distribution poles. Relocation of pole needs to be planned a year ahead. 4. The Bank has experiences work together with PLN,

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
					Pertamina on geothermal.
				5. PLN also faces problem to get permit from district/city government. It takes time and could be 3-6 months	5. PLN and district, city government as are mandated to provide the basic need services to all citizens. Provincial, district/city government should support accelerating infrastructure development. PLN HQ and the Bank agree to finance distribution activities with low impact and fast implementation.
				6. Selection of location for Program should have good coordination with Province particularly relate to village electricity	6. Agree, PLN is maintaining coordination with Provincial and district/city government.
				7. How is distribution of Program budget to *Wilayah*? 8. How does PLN evaluate Program? 9. How does the Bank provide feedback to PLN?	7. Implementation of Program will be as normal PLN Wilayah activity. Budgetary system and implementation of Program follow PLN procedure. 8. During supervision of implementation of Program the Bank will review randomly SILM (Information System for Environmental Management) either in PLN HQ or Wilayah and grievance handling complaints through report of Call Centre 123 in Wilayah Office.
				10. Who are eligible to get access to electricity in the Program?	Everybody has right to get access to electricity. Everybody can register to local office of PLN.
				11. PLN should pay attention impact of high voltage installation (SUTET)	Program will only finance the distribution program, SUTET is not cover under program because it is not part of power distribution
				12. Distribution poles should match with detail spatial plan and PLN should improve quality of the services too besides quantity of services.	PLN agrees that Program should also improve the services through capacity building of PLN both in Wilayah and HQ

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
				13. Although impact of environment is minor why PLN does not need prepare env document?	According to Indonesian EA regulation, environmental impact of distribution activities is low therefore there is no requirement for preparing env document. Except for hazardous waste and used transformer oil or spillage management (B3) SOP to 7 *Wilayahs*. Refer to PLN Regulation this waste must be managed by licensed third party and PLN must has license too for temporary storing the B3 waste. So far PLN has fulfilled the requirements (table 6 of ESSA)
3	5 Nov 2015	*Wilayah* Bangka Belitung, in Belitung Island	35 participants • PLN Headquarter • PLN *Wilayah* including Area and Rayon • Relevant agencies from Belitung and Belitung Timur Districts • NGOs • Local leaders as representatives of community • Local radio • Journalist from local newspapers • Contractor PLN	1. In principal community of Belitung Island supports the Program and support to environmental and social requirements what PLN required. Community needs access to electricity and better quality on services. PLN should be able to minimize number of power outages occurred in the last two months.	1. PLN will improve the performance as much as possible through the Result Area 1, 2 and 3 of Program. PLTU Suge is the new one and it would improve electricity services in Belitung Island.
				2. Instead of annual cutting on trees branches PLN would be better replace the trees with a slow-growing tree, but a good for greening trees such as *pohon tanjung*.	This is very good input and PLN will consider Tanjung tree.
				3. Communities do not objection if PLN uses their land for poles and cut the	Good input and acknowledged by PLN and participants. PLN did consultation and

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
				trees but PLN should control more its contractor works. Installations of new poles are often not proceeded without proper information by contractors to landowners.	information in each village organized by relevant village head during planning. During implementation the role of contractor is to do consultation with local communities before construction. Public can report their complaints through Call Center 123 however PLN agrees to pay attention on this issue with contractor.
				4. Why the Program put forest land or conservation land as negative list for distribution activities? Why PLN HQ cannot solve this issue with Min of Forest in central level?	Program will be implemented within four years and should be implemented in area and do not have environment and social risk. If Program is to affect forest and that must follow environmental requirements and permits from Ministry of Env and Forest, the Program will not achieve its objective
				5. Ethnic group who are living far from the city has the same need to get access to electricity as people who are living in the city. We are support the Program	PLN has same service to everybody who wants to get access to electricity. Wilayah and contractor will do consultation before construction to reach agreement.
				6. Additional power supply in Belitung has been requested by investors such as hotels in the last two years	Construction of PLTU Suge has been completed and is being in performance test. From January 2016, Belitung will have capacity 48,8 MW while the peak load is 35 MW.
4	Dec 10, 2015	*Wilayah SumSel* in Palembang	30 participants • PLN Headquarter • PLN *Wilayah* South Sulawesi including *Area, Rayon and UPK* • Representatives of agencies from provincial and city level	1. Support the Program but PLN should provide information about distribution development plan to public before any construction 2. PLN must be transparent on installation cost to public 3. YLKI will send to the	1. PLN will always follow Director Decree No. 474 and 606 of 2010 concerning on Construction Standard for low and medium voltage, in which the PLN should provide information and do consultation prior any construction 2. New location for access to

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
			• NGOs	Bank the proposed locations that need access to electricity	electricity and the cost is normally publish in local newspaper 3. PLN is welcome to YLKI and public to receive any proposed location which needs to get access to electricity
				4. Law No. 23 of 2014 should be added as reference. District no longer has the authority to plan for village electricity and it becomes the authority of the provincial government	4. Good input and PLN already have good coordination with provincial level. Final ESSA will be revised accordingly.
				5. In the monitoring of Program, it should consider gender and children as beneficiaries	5. Good input. PLN and the Bank will do evaluation in the mid term and at the end of the Program and will consider this input.
				6. Although the Program has minor impact on environment and social, PLN has to maintain information communication with the community/ public prior construction	6. Agree and it is accordance with the rules of PLN
				7. PLN should have proper management and follow the regulations on B3 waste for used transformers.	7. Agree, it is accordance with the rules of PLN
				8. PLN should ensure that the greening in areas where trees have cut for the Program. PLN is responsible to replant the trees as soon as possible.	8. Agree and PLN has good coordination with district/city government
5	Dec 11, 2015	*Wilayah SumBar* in Padang	33 participants • PLN Headquarter • PLN *Wilayah* West Sumatra including *Area,* and *Rayon* • Representative of agencies from	1. PLN also should reduce outage so business activities are not disturbed. 2. In Bukittinggi, PLN has a problem to maintain the cutting trees because of Adipura and old trees.	1. This is part of Result Area 1, 2 and 3. 2. Underground cable is very expensive, cost around 4 times than the normal cable. However, Wilayah

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
			provincial level • NGOs • Nagari Indigenous Institute (*Lembaga Kekerabatan Nagari)* • Academica (local universities)	Underground cable is the best way to be trial in the Program. Is it possible for PLN to do a pilot for underground cable?	will discuss with PLN Headquarter whether it is possible for piloting in Bukittinggi.
				3. Call center 123 always busy and handling in the grounds not always fast.	3. Wilayah will more pay attention on this case.
				4. PLN should consider natural disaster and technical problem in the generator	4. Agree
				5. Everyone as well as IP or ethnic groups needs access to electricity. However, prior consultation and information before construction must be conducted by PLN with the community. Mutual agreement on the Program is the basic reference for PLN before construction	5. Agree. PLN has same services and treatment to any customers. Mutual agreement has to be built between PLN and the community before any construction started.
				6. PLN also faced problem to move distribution poles because of road widening. It is very often projects (non-PLN) did not allocate budget for moving the poles.	6. Good input
				7. Whenever investors who would like to invest visited government office, the main question from the investor whether capacity of the electricity enough to cover new business.	7. PLN is welcome to any investor and please inform the investor to send letter to PLN for the business plan and its schedule so PLN can provide electricity services.
				8. Whenever there is price per KWH changes, PLN should provide proper information to public so that people know the amount of bills to be paid	8. Agree and so far PLN always publish it in local media. Changes in electricity rates is national wide and it must be put in national and local media

No	When	Where	Who & how many people participated	Key issues raised during the consultation	How these issues were addressed in the revised documents
				will be higher than the previous bill.	(newspaper and television)
				9. Outages should consider work/business time	9. Agree, it covers in result area 1, 2 and 3
				10. Routine cutting of trees need to pay attention to the aesthetics of the city.	10. Agree
				11. Everyone dreams to have access to electricity and ready to support Program in West Sumatra	11. Agree