

MONITORING AND EVALUATION FRAMEWORK

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Table 1: Reporting to Stakeholders

Stakeholder Type	Specific Entities	Method of Engagement	Frequency (per year)
Shareholders and Investors		GMS Investor road shows Analyst update and conference calls Plant visit General Meeting of Bondholders	Annual Annual 10 times As necessary Annual
Government	Ministry of Energy (MOE) Ministry of Finance (MOF) State-Owned Enterprises (SOE) Ministry of Forestry	GMS Ministry forums Tripartite forums Written communication Annual reports Quarterly reports Other reports as required	Annual As necessary As necessary As necessary Annual Quarterly As necessary
Regulators and Legislators	FSA (formerly <i>Bapepam-LK</i>) House of Representatives	Special forums Public hearings Commission sessions Tripartite forums Written communication Annual reports Quarterly reports House of Representatives Sessions Regional representative councils Other reports as required	As necessary As necessary As necessary As necessary Annual Quarterly As necessary As necessary As necessary
Employees	PLN Workers Union Indonesia Workers Union (SPSI)	Bipartite forums Employee-Management forums SPPLN Alignment of human resources organizations Regular training/hearing	Annually or as necessary
Work Partners and Similar Industrial Associations		Specific training for operational partners Ethics guidelines Contractual agreements Quality standards Occupational safety and management systems Environmental management system Supplier assessment and management Supplier selection eProcurement application	As necessary
Customers		Customer Satisfaction Survey Complaint services Meetings with customers Special service program	As necessary
Creditors		Plant visit Conference calls Club deals Corporate Action Planning presentation	As necessary
Media		Press release Media gathering Press conference Press briefing Press tour	As necessary
Public		Negotiation in planning Collective monitoring over program realization Philanthropic activities	As necessary

Table 2: Information Technology and Management Applications

IT application	What it collects data on and monitors	Responsible Division
AP2T ^a	Sale of electricity energy per month by region	Commercial Division
Call Center	Sales data	Commercial Division Distribution Division
SIPINTER	Land acquisition for construction, power plants, transmission lines, and substations	Permits and land acquisition Division SPKK Construction Division
ERP	Business processes	Financial Division Budgeting Division All divisions
Employee Performance Management System (KPI-based)	Company Performance Power Plant Construction Reduce Network Losses and SAIDI/SAIFI Social Affairs Performance Performance in the field of Environmental preservation	Talent Division Human Resources Division Organization Structure Division
SIP2A	Financial information, budgeting, monitoring disbursements	All divisions
TALENTPOOL	Recruiting and personnel management	Human Resources Division
PMO	Program management	Construction Division Corporate Planning Division SPKK
P3B	Load dispatching	Load dispatching centers Transmission Division Distribution Division Generation Division
SCADA	Distribution systems	Transmission Division Distribution Division Generation Division
FOIS	Fault outages	Transmission Division Distribution Division Generation Division
EPROC	Procurement	Procurement Division Supply Chain Management Division All procurement departments in PLN units
APKT	Complaints	Distribution Division
NE Balance 217	Energy balance	Distribution Division Transmission Division Systems Planning Division

AP2T = Aplikasi Pelayanan Pelanggan Terpusat (centralized customer services application), APKT = Aplikasi Pengaduan dan Keluhan Terpadu (integrated complaints application), ERP = enterprise resources planning, EPROC = online PLN procurement system, FOIS = forced outages information system, P3B = Penyaluran dan Pusat Pengatur Beban (Load Dispatch Center), PLN = State Electricity Corporation, PMO = project management office, SCADA = supervisory control and data acquisition, SIP2A = Sistem Informasi Perencanaan dan Pengendalian Anggaran (Planning and Budgeting Control Information System, SIPINTER = Sistem Pengelolaan Informasi Terpadu (Integrated Management Information System).

^a This application unites the business processes related to PLN customers. It was launched on 14 December 2012 in Banda Aceh, Nanggroe Aceh Darussalam.

Source: PLN

Table 3: Regularly Monitored and Reported Data by PLN

OPERATIONS	
Electric Power Supply	Power Balance (MW)
	Energy Balance
	Load Factor, Capacity Factor, and Demand Factor (%)*
Operation Result	Number of Customers by Type of Customers* +
	Connected Capacity by Type of Customers (MVA)*
	Energy Sold by Type of Customers (GWh)*
	Revenue by Type of Customers (million Rp)
	Average Energy Sold by Customers (kWh)*
	Average Selling Price of Electricity by Type of Customers (Rp/kWh) *
	Number of Customers by Type of Voltage *
	Connected Capacity by Type of Voltage (MVA)
	Energy Sold by Type of Voltage (GWh) * +
	Revenue by Type of Voltage (million Rp) *
	Number of Customers, Connected Capacity and Energy Consumption by Tariff Category
	Waiting List
	SAIDI and SAIFI
	SOD and SOF
	Number of Distribution Interruption per 100 kmc
Electrification Ratio and Energy Consumption per Capita +	
Generation	Number of Generating Units *
	Installed Capacity (MW) * +
	Rated Capacity (MW) *
	Energy Production by Type of Power Plant (GWh)* +
	Consumption of Fuel *
	Unit Price of Fuel *
	Energy Production by Type of Fuel (GWh)
	Captive Power
Transmission and Distribution	Length of Transmission Lines (kmc)*
	Length of Medium and Low Voltage Lines (kmc)*
	Number and Total Capacity of Substation Transformers
	Number and Total Capacity of Distribution Substation Transformers
Financial	Balance Sheet (million Rp) *
	Profit and Loss (million Rp) *
	Fixed Asset & Depreciation (million Rp)*
	Accounts Receivable (million Rp)*
	Average Collection Rate*
	Generation Cost *
	Average Generation Cost per kWh *
	Financial Ratios *
Human Resources	Number of Employees by Grade
	Number of Employees by Education
	Productivity of Employee
	Energy Sold by Type of Customers (GWh)
	Revenue (million Rp) *
	Installed Capacity (MW) *
	Energy Production (GWh) * +

GWh = gigawatt-hour, kmc = kilometer-circuit, kV = kilovolt, kWh = kilowatt-hour, MVA = megavolt-ampere, MW = megawatt, Rp = rupiah, PLN = State Electricity Corporation, SAIDI = system average interruption duration index, SAIFI = system average interruption frequency index, SOD = system outage duration, SOF = system outage frequency.

* Indicates historical analysis

+ Indicates analysis for Five Year Development Plan

Table 4: Monitoring and Evaluation Responsibilities and Expanded Data Sources with DLIs and Other Indicators

Performance Targets and Indicators with Baselines	Responsible Division	Data Sources	Monitoring Frequency	System	Reporting Documentation Monthly
Outcome: Adequacy and reliability of power supply achieved for Sulawesi					
DLI 1: Expanded access to electricity services: Number of total customers in Sulawesi and Nusa Tenggara increased by an average annual rate of at least 5.6% (at least 1.37 million more customers by 2020 from the 2016 baseline)	Wilayah, REG-SNT	<ul style="list-style-type: none"> – Numbers of customers connected – Type of customer – Location – Wait time for new connections 	Real time	AP2T	SILM
DLI 2: Growth in delivered electricity services: Total annual electricity sales increased by an average annual rate of at least 8.5% (an increase of at least 4,374 gigawatt-hours by 2020 from the 2016 baseline), with an equal or higher growth rate for commercial customers	Wilayah, REG-SNT	<ul style="list-style-type: none"> – Numbers of customers connected – Type of customer – Location – Accounts receivable 	Real time	AP2T	SILM
DLI 3: Improved reliability of services: Feeder line permanent interruptions ^a in the distribution system reduced by an average annual rate of at least 5% (a reduction of more than 3.61 interruptions per 100 circuit-kilometers by 2020 from the 2016 baseline)	Wilayah, REG-SNT	<ul style="list-style-type: none"> – Duration – Frequency – Type of customer – Phone calls – Employee report – Region/branch office 	Real time	AP2T	SILM
Outputs					
DLI 4: Number of distribution transformer units installed increased by an average annual rate of at least 5.6% (at least 9,933 more units by 2020 from the 2016 baseline)	Wilayah, REG-SNT	Progress of transformer installation	Quarterly	P3B	SILM
DLI 5: The length of medium-voltage distribution lines installed increased by an average annual rate of at least 5.6% (at least 11,508 circuit-kilometer increase by 2020 from the 2016 baseline), with an equal or higher growth rate in Lombok and Flores	Wilayah, REG-SNT	Progress of distribution line installation	quarterly	P3B	SILM SCADA Report P3B
DLI 6: Pilot-scale smart grid projects implemented in at least four areas by 2021	Wilayah, REG-SNT, DIV-SYS, Smart Grid Task Force	Progress reports on SG pilots, guidelines, etc.	Quarterly		SPKK/SILM
DLI 7: Operational efficiency and resource optimization enhanced, with at least 75% of total customers using digital prepaid meters or smart meters by 2021 (from 48% in 2016)	Wilayah, REG-SNT	Progress on new meter installation and old meter replacement	Monthly		SILM

Performance Targets and Indicators with Baselines	Responsible Division	Data Sources	Monitoring Frequency	System	Reporting Documentation Monthly
DLI 8: Asset and waste management improved, with 90% of used PLN-owned equipment from the 2016 disposal inventory safely disposed of by 2021	DIVACT, DIVK3L, Wilayah, REG-SNT	<ul style="list-style-type: none"> - Progress on guidelines/regulations/approvals - Progress of waste disposal 	Monthly		SPKK/SILM
Timely completion of implementation of distribution system contracts increased to more than 75% by 2021	Wilayah, REG-SNT, SCM	<ul style="list-style-type: none"> - Operating expenditures - Accounts receivable - Project progress - Contract implementation 	Monthly		SPKK

AP2T = Aplikasi Pelayanan Pelanggan Terpusat (centralized customer services application),^a DLI = disbursement-linked indicator, FPR = financing for prior results, KPI = key performance indicator, P3B = Penyaluran dan Pusat Pengatur Beban (Load Dispatch Center), PLN = State Electricity Corporation, SCADA = supervisory control and data acquisition, SILM = Information System for Management Reporting, SPKK = Corporate Performance Control Unit.

^a PLN defines permanent interruptions as those over 5 minutes in duration.

^b This application unites the business processes related to PLN customers.

Sources: Asian Development Bank and PLN staff.

Table 5: Suggestions for Indicative Disbursement-Linked Indicator Protocols and Verification Measures

General Rules	
1.	PLN will collect all reports and information necessary to verify <i>progress</i> of the disbursement-linked indicator (DLI) and prepare a draft Summary Progress Report (SPR) This report will be generated by SPKK on a quarterly basis and provided to ADB within 30 days of draft completion. The SPR will be consistent with PLN monthly SPRs.
2.	PLN Director of Corporate Planning or designee will assess the achievement of the DLIs and authorize the Disbursement-Linked Indicator Achievement Report to be shared with the Ministry of Finance (MOF) and ADB.
3.	PLN will collect all reports and information necessary to verify <i>accomplishment</i> of the DLIs and prepare a draft Disbursement-Linked Indicator Achievement Report . This report will be generated by SPKK on an annual basis.
4.	ADB will engage an Independent Verification Agent to check and verify the information and results prior to disbursement.
5.	During Review Missions, the findings of the progress of the DLIs will be discussed with the PLN counterparts and comments provided.
6.	PLN counterpart(s) resolves any disagreements about DLI achievement. In case the DLI is not fully achieved, Steps 1 to 3 above will be applied.
7.	PLN submits the Withdrawal Application to ADB accompanied by the Review Mission's verification of DLI achievement and other supporting documents.
8.	Withdrawal application can be submitted in the same year the DLI is achieved or the following year depending upon PLN's financial needs.
9.	The DLI matrix will be reviewed during Mid-Term Review and restructured as necessary.