

CONTRIBUTION TO THE ADB RESULTS FRAMEWORK¹

Level 2 Results Framework Indicators (Outputs and Outcomes)			
No.	Outcomes	Targets	Methods ^a /Comments
1.	New households connected to electricity (number)	1.3 million additional new households by 2020	PLN uses “residential customers” to track connections to households. Of the 5.6 million total customers in Sulawesi and Nusa Tenggara in 2016, 5.2 million were residential customers (approximately 93%). Assuming the same average annual growth rate of 5.6%, the number of residential customers is expected to reach 6.5 million or more by 2020.
2.	Distribution lines installed or upgraded (kilometers)	5,754 km (MV) and 5,435 km (LV) of additional lines installed by 2020	PLN uses circuit-kilometers (ckm) for corporate monitoring purposes which is the sum of line length in km times the number of circuits (e.g. a line of 10 km with two circuits will be counted as 20 ckm). PLN’s standard design is to have two circuits for MV lines, whereas LV lines may be dual or single circuit. Based on PLN staff estimates the assumed km/ckm ratio is 50% for MV and 70% for LV, respectively.
3.	Greenhouse gas emission reduction (tons of carbon dioxide-equivalent per year)	51,490 tons by 2021	Estimate includes emission reductions from: (i) the enabling of 43 MW of additional solar photovoltaic capacity through the smart grid pilots (half the total capacity of proposed projects in Kupang and Lombok that are on hold due to the lack of grid absorptive capacity) operating at 15% load factor; and (ii) reduced technical transmission losses from having 25% higher share of smaller 100 kVA transformers at shorter intervals that will reduce the length of low-voltage lines. The average grid emission factor used for Sulawesi and Nusa Tenggara is 0.7 tons per MWh.

ADB = Asian Development Bank, ckm = circuit-kilometer, km = kilometer, kV = kilovolt, kVA = kilovolt ampere, LV = low voltage, MW = megawatt, MWh = megawatt-hours, MV = mid voltage, PLN = State Electricity Company.

^a ADB. 2011. *Manual for Calculating Energy Output Indicators*. Manila.

Sources: PLN and ADB estimates.

¹ ADB. 2013. *Guidelines for the Use of ADB's Results Framework Indicators for Core Sector Outputs and Outcomes*. Manila.