

## CONTRIBUTION TO THE ADB RESULTS FRAMEWORK

No.	Results Framework Indicators	Targets	Methods / Comments
1.	Greenhouse Gas Emission Reduction (tCO <sub>2</sub> -equiv/yr)	54,400	Greenhouse gas reductions will accrue from decreased use of backup generators running on diesel or gasoline which have an emissions factor of 0.8 (tCO <sub>2</sub> e/MWh). Kathmandu Valley has 200 MW of diesel gen sets which produced 340,000 MWh in 2012–2013 <sup>a</sup> . Assuming this is all displaced by a mix of hydro and imports from India, the GHG reductions will be 340,000 MWh/yr x 0.16 tCO <sub>2</sub> e/MWh = 54,400 tCO <sub>2</sub> e/yr. <sup>b</sup>
2.	Distribution lines installed or upgraded (km)	300 km of 11 kV lines and 600 km of 0.4 kV lines constructed and reinforced	Measured on augmentation of distribution lines
3.	Energy saved (terawatt-hour equivalent per year)	0.0065	Assumes distribution system loss reduction from 15% to 10% of 130 GWh/yr supplied

ADB = Asian Development Bank, GWh = gigawatt hour, km = kilometer, kV = kilovolt, MWh = megawatt hour, tCO<sub>2</sub>-equiv/yr = tons of carbon dioxide equivalent per year, yr = year.

<sup>a</sup> World Bank. 2014. Diesel Power Generation: Inventories and Black Carbon Emissions in Kathmandu Valley, Nepal. The World Bank Group. Washington, D.C.

<sup>b</sup> The effective emissions factor for Upper Tamakoshi plus India grid is calculated as:  $1,997,280/7,008,000 \times 0.82 = 0.64$  tCO<sub>2</sub>e/MWh. This is subtracted from the diesel emissions factor to calculate net greenhouse gas reduction:  $0.8 - 0.64 = 0.16$  tCO<sub>2</sub>e/MWh.

Source: Asian Development Bank estimates.