

UPDATED CONTRIBUTION TO THE ADB RESULTS FRAMEWORK – TRANCHE 3

No.	Results Framework Indicators	Targets	Methods / Comments
1	Installed energy generation capacity	400 MW	Evaluation of performance of generation units built
2	Transmission lines installed and upgraded	72 km	Measured on physical construction
3	Greenhouse gas emission reduction	808,188 tons CO ₂ equivalent per year	Offset based on gas fired CCPP- vs. coal fired electricity and generation design basis. ¹

ADB = Asian Development Bank, CCPP = combined cycle power plant, CO₂ = carbon dioxide, km = kilometer, MW = megawatt, Nos = numbers.

Source: Asian Development Bank.

¹ The replacement of aging steam and gas turbine power plants of equivalent capacity of 220 MW with a more efficient 400 MW gas-fired CCPP at the Ashuganj Power Station complex is a supply-side efficiency improvement project. Additional 180 MW generation capacity will be added. GHG emissions intensity will be reduced. The increased energy output will offset emissions from back-up diesel generation and new coal-fired generation capacity. The emissions factor for combined cycle gas turbine plants is $577 \times 2/3 = 385$ tCO₂e/GWh; the emissions factor for supercritical coal is assumed at 988 tCO₂e/GWh; the reduction factor is $988 - 385 = 603$ tCO₂e/GWh. Assuming 85% plant load factor, the GHG offset is estimated as follows:
 $0.18 \text{ GW} \times 8760 \text{ hours/year} \times 0.85 = 1,340.28 \text{ Gigawatt-hours/year}$
 $1,340.28 \text{ Gigawatt-hours/year} \times 603 \text{ tCO}_2\text{e/GWh reduction} = 808,188 \text{ tCO}_2\text{e/year}$