Bangladesh

National Electrification Rate [1]
- National: 85%
- Urban: 97%
- Rural: 78%

Population
- Total: 164.7 million [2]
- Urban ratio: 38.2% [2]

Population growth
- Medium population growth: 0.9% [2]

Average household size, urban: 5.4 people [3]
Average household size, rural: 5.7 people [3]
Average electricity consumption per
- Household: 770 kWh/year
- Capita: 139 kWh/year (Tier 3) [1], [4]

Low demand target[47]: U3-R1
High demand target: U4-R3

Off-grid technology cost [5]–[12]:
- Expected Hydro mini-grid cost: ~3000 $/kWp
- Expected hybrid mini-grid component costs:
  - PV panels: 503 $/kWp
  - Batteries: 139 $/kWh
  - Inverter: 80 $/kWp
  - Charge controller: 142 $/kW
  - Diesel generator: 261 $/kW
  - Wind turbine: 2800 $/kW
- Expected PV stand-alone (or SHS) costs:
  - ~9620 $/kWp if kW < 0.02
  - ~8780 $/kWp if 0.02< kW < 0.05
  - ~6380 $/kWp if 0.05< kW < 0.1
  - ~4470 $/kWp if 0.1< kW < 1
  - ~6950 $/kWp if kW > 1

Grid generating cost [13]–[15]
- Expected on-grid cost (low): 0.105 $/kWh
- Expected on-grid cost (high): 0.1428 $/kWh

T&D costs [16], [17] [18], [19] [8], [20]–[25]:
- HV line (69-132 kV): ~53000 $/km
- MV line (11-33 kV): ~7000 $/km
- LV line (0.2 – 0.4 kV): ~4250 $/km
- HV to MV substation (1000 kVA): ~25000 $/unit
- MV to V substation (400 kVA): ~10000 $/unit
- Service transformer (50 kVA): ~4250 $/unit

Grid generation capacity cap per year: ~3144 MW/year
Grid connection limit: ~2.5% population/year

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[47] U: Urban households; R: Rural households; 1-5: Electrification Tiers as defined by ESMAP's Multitier framework

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