Djibouti

National Electrification Rate [1]

- National: 60%
- Urban: 70%
- Rural: 26%

Population

- Total: 1.0 million [2]
- Urban ratio: 77.8% [2]

Population growth

- Medium population growth: 1.3% [2]
- High population growth: 1.6% [2]

Average household size, urban: 6.5 people [3]

Average household size, rural: 7.7 people [3]

Average electricity consumption per

- Household: 2058 kWh/year
- Capita: 290 kWh/year (Tier 4) [1], [4]

Low demand target: U4-R1

High demand target: U5-R3

Off-grid technology cost [5]–[9]:

- Expected PV mini-grid cost: ~2950 $/kWp
- Expected Hydro mini-grid cost: ~3000 $/kWp
- Expected Wind mini-grid cost: ~3750 $/kWp
- 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

- Expected on-grid cost: 0.024 $/kWh [10], [11]

T&D costs [12], [13] [14], [15] [8], [16]–[21]:

- 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 MV substation (400 kVA): ~10000 $/unit
- Service transformer (50 kVA): ~4250 $/unit

Grid generation capacity cap per year: ~19 MW/year

Grid connection limit: ~2.5% population/year

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[1] For additional information refer to GEP data & cost assumptions guide.