# Haiti

National Electrification Rate [1]

- National: 45%
- Urban: 79%
- Rural: 4%

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Population

- Total: 11.4 million [2]
- Urban ratio: 57.1% [2]

Population growth

- Medium population growth: 1.2% [2]

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Average household size, urban: 5.5 people [3]

Average household size, rural: 5.7 people [3]

Average electricity consumption per

- Household: 226 kWh/year
- Capita: 40 kWh/year (Tier 2) [1], [4]

Low demand target[49]: U2-R1

High demand target: U3-R3

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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

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Grid generating cost [13]–[15]

- Expected on-grid cost (low): 0.1 $/kWh
- Expected on-grid cost (high): 0.136 $/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: ~35 MW/year

Grid connection limit: ~2.5% population/year

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

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