

Lesotho

National Electrification Rate [1]

- National: 34%
 - Urban: 70%
 - Rural: 20%
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Population

- Total: 2.3 million [2]
- Urban ratio: 28.2% [2]

Population growth

- Medium population growth: 1.2% [2]
 - High population growth: 1.5% [2]
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Average household size, urban: 2.6 people [3]

Average household size, rural: 3.1 people [3]

Average electricity consumption per

- Household: 952 kWh/year
- Capita: 334 kWh/year (Tier 3) [1], [4]

Low demand target: U3-R1

High demand target: U4-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:
 - o ~9620 \$/kWp if $kW < 0.02$
 - o ~8780 \$/kWp if $0.02 < kW < 0.05$
 - o ~6380 \$/kWp if $0.05 < kW < 0.1$
 - o ~4470 \$/kWp if $0.1 < kW < 1$
 - o ~6950 \$/kWp if $kW > 1$
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Grid generating cost

- Expected on-grid cost: 0.026 \$/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: ~11 MW/year

Grid connection limit: ~2.5% population/year

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