Electrification Factsheet
Azraq Camp - Jordan
June 2018

UNHCR and the IKEA Foundation have created the first refugee camp in the world powered by renewable energy. A medium- and low-voltage power network funded by the Saudi Fund for Development connected the IKEA Foundation Solar Plant to refugee shelters, formal and informal businesses, offices and utilities, providing year-round electricity in the camp.

Electricity Access

4,903 shelters
connected to the grid

Average of 66 kWh per month per household or 2.2 kWh per day

16
hours of electricity provided daily to shelters

NGO 22
organizations and operational facilities supplied with electricity

Environmental Impact

3,200 MWh's of clean energy
produced every year

2,240 tons per year reduction of CO2

510 US passenger car emissions for a year

The burning of 1008 metric tons of coal

Cost Savings

$1.17
million of annual reduction in electricity bills

The construction cost of approximately US$ 1.4/Watt

Anticipated return on investment within 3 years

Improved Lighting

16,950
solar lanterns
distributed to households

430
solar street lights
installed in the camp

10,006
Energy Efficient
Lightbulbs (LED) distributed

Livelihood Opportunities

50 refugees
employed in the solar plant construction

120 refugees
employed in the construction of the electrical network

200 shops
connected in the 2 marketplaces

10 trained refugee 'electricians'
support UNHCR electrical activities in the camp

Azraq Electrical Network Physical Facts

The Solar Plant uses **7,788** solar PV panels with a lifespan of 25 years. This is the equivalent size of **5** football fields

19 km's of medium voltage cables and **2,700** low voltage poles connect shelters and operational facilities to the local electrical grid.

IKEA Foundation Renewable Energy Phases
Azraq Camp - Jordan
June 2018

The Azraq Camp Solar Project is to be implemented over three concurrent phases. By mid-2019 all three phases of PV solar infrastructure will be completed and connections to village 2 and 5 finalized. Overall Azraq Camp will be approximately 70% powered by renewable energy.

Phase 1 | 2 MWp on grid
Completed in June 2017
Connected to Villages 3 and 6

Covers up to 35-40% of camp's electrical needs

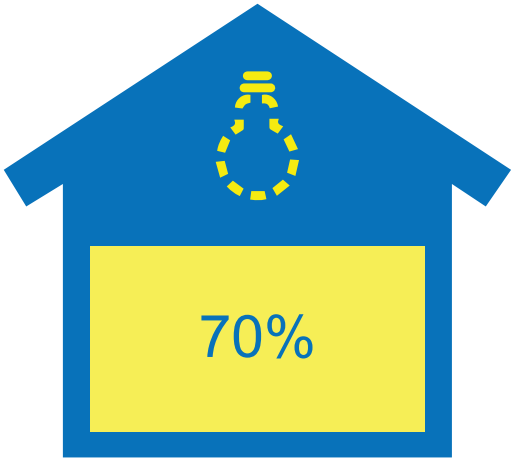
4,903 total shelters
+ **22** organizations & operational facilities
+ **2** marketplaces

Phase 2 | 2 MWp + 1.5 MWp on grid
To be completed by the end of 2018
Connected to Villages 2, 3, 5 and 6

Will cover up to 55% of camp's electrical needs

10,470 total shelters
+ **22** organizations & operational facilities
+ **4** marketplaces

Phase 3 | 3.5 MWp on grid + additional 1.5 MWp off grid
To be completed in mid-2019



Connected to Villages 2, 3, 5 and 6

Will cover up to 70% of camp's electrical needs

10,470 total shelters
+ **22** organizations & operational facilities
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How the 2.2 kWh's in Azraq compares to global daily household consumption: