

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



22
organizations and operational facilities supplied with electricity

Solar Plants Environmental Impacts



5,500 MWh's of clean energy produced every year



4,500 tons per year reduction of CO2



876 US passenger car emissions for a year



The burning of **2,031 metric tons** of coal

Solar Plants Cost Savings



\$2M

million of annual reduction in electricity bills
The construction cost of approximately **US\$ 1.4/Watt**



Anticipated return on investment within **3 years** after the completion of the project

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.

Improved Lighting



16,950

solar lanterns distributed to households



472

solar street lights installed in the camp



424

LED street lights installed in the camp



10,006

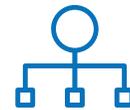
Energy Efficient Lightbulbs (LED) distributed

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

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 including:

- 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

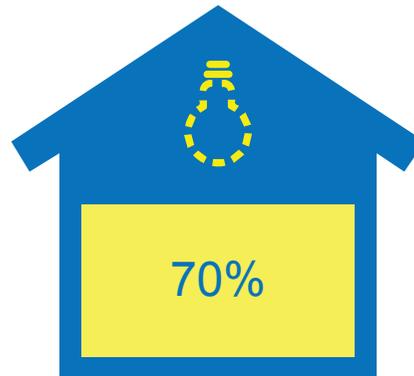


Will cover up to 55% of camp's electrical needs including:

- Up to 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 including:

- Up to 10,470 total shelters
- + 22 organizations & operational facilities
- + 4 marketplaces

How the 2.2 kWh's in Azraq compares to average daily household consumption around the world:

Source: World Energy Council 2014

