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.

**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.

- **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**

**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

**Environmental Impact**

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

**Cost Savings**

- **$1.17 million of annual reduction in electricity bills**
- The construction cost of approximately **US$ 1.4/Watt**
- **16,950 solar lanterns** distributed to households

**Improved Lighting**

- **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
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

**How the 2.2 kWh’s in Azraq compares to global daily household consumption:**

- 0.9 kWh
- 1.8 kWh
- 2.2 kWh
- 2.5 kWh
- 9.2 kWh
- 13.6 kWh
- 13.9 kWh
- 21.2 kWh
- 33.9 kWh