

# GOOD PRACTICE



Twelve-year old Zeinab joins school courses remotely from her temporary home in Azraq camp, Jordan. Since schools across Jordan were closed due to coronavirus measures, she has relied on the e-learning platform provided by the Ministry of Education thanks to a solar powered TV. © UNHCR/ Mohammad Hawari

## Learning from the motto ***'We can't control what we can't measure'***.

Well renowned for marking clean energy milestones, Azraq and Zaatari camps in the north of Jordan, close to the borders with Syria, are no strangers to the impacts of the COVID-19 pandemic and the climate emergency. While the country has committed to increase its portion of renewable energy sources reliance (currently at 20% and aiming at 30% by 2030), refugee camps paved the way to clean energy efficiency with pioneering solar projects and street lighting that transformed the lives of more than a hundred thousands Syrian refugees. Covering most of the refugee population energy consumption needs with solar power, Azraq and Zaatari camp offer the best examples of energy sustainability in refugee settings. The operation is confronting the new challenges posed by both the pandemic and the climate emergency with a steady monitoring approach, looking at further expanding the solar system and reducing the camps' carbon footprint while maintaining reasonable consumption, fair distribution and sustainable generation criteria to fully cover the natural growth in energy loads.

## North JORDAN


**2**  
 refugee camps

**Over 121,000**  
 Syrian refugees

Azraq and Zaatari Camps are located in the north and the northeast of Jordan respectively, close to the borders with Syria. The already dry area has been facing the impacts of the climate emergency in the form of less accumulated rainfalls, harsher and colder winters, as opposed to extremely high temperatures during summers. Due to the COVID-19 pandemic, the operation has seen a sharp increase in the electric consumption needs of the refugee population, with more electrification hours being required by students attending e-learning programmes. This consumption increase has impacted the operational budget and affected the quality of life in the camps resulting in electrification hours reductions, between 14 to seven hours per day. Major projects were implemented to reduce carbon footprint, both in offices and camps, and provide households with the required electrification hours thanks to solar energy. Azraq Camp was the first refugee camp powered by such system, involving refugees in its' construction works. Zaatari, the largest solar plant ever built in a refugee camp, costed around 17M USD.

## Achievements in camps


**100%**

connected to grid


 Efficient and solar-powered  
 lighting installed

 Solar PV system installed for  
 both camps

**+300** refugees involved in  
 the construction

 Azraq Camp: **6,300** Tons/yr

 Zaatari Camp: **15,600** Tons/yr


'For all of us living in a temporary camp is very difficult. But working on the solar plant helps giving a sense of stability'

**Abdullah,**  
 Syrian refugee



Azraq camp, Jordan. As qualified electrician, forty-year-old Abdullah had a comfortable lifestyle back in Syria. After the conflict broke out, he and his family were displaced four times inside Syria before reaching Jordan for safety. In Azraq, Abdallah has been working at the solar plant that provides electricity to the camp, becoming a supervisor last year, a job which he says puts his family in a better situation than many others in the camp. © UNHCR

## Ambitious clean energy goals

Faced with the specific challenges of the growth in energy consumption due to the pandemic, UNHCR in Jordan is building on its innovative solar projects, strengthening monitoring and control measures to increase energy efficiency. This entails installing a central energy monitoring system as well as control devices to set a cap of maximum power consumption. Smart energy dispensers will be installed at each shelter to ensure an equal and fair power distribution to all people of concern, offering prepaid options for consumption above the limit. At the same time, offices in Jordan are set to further reduce their CO<sub>2</sub> emissions by consistently increasing their portion of clean sources reliance to 40% by 2026 and doubling this target by 2030. The operation has completed major steps adopting **LED-efficient lighting**, and already relying on two **electric vehicles (EVs)** with chargers in their premises, a **first in the MENA region**. Not only EVs contribute to reduce carbon emissions significantly, but also resulted in costs reduction of about 80% for the offices. As the EV pilot project proved successful, offices aim to further increase energy efficiency doubling their electric vehicles (EVs) assets, as well as introducing electric cars and shuttle bus in camps, where they will rely on clean energy for charging thanks to the existing solar plants, making operational transports entirely sustainable.

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