

Solar solution brings water to besieged Syria town

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A Syrian man waters plants near an iron cart loaded with solar panels in the rebel-held town of Douma, on the outskirts of the capital Damascus, on June 7, 2017

Solar panels on wheels make for a strange sight on the streets of Syria's besieged Douma, but the makeshift generator is helping local residents secure water.

Douma lies outside the capital Damascus, in the rebel stronghold of

Eastern Ghouta, and has been under a suffocating government siege since 2013.

Residents have had no electricity for four years, relying instead on generators for everything from lighting to refrigeration.

But the siege also means [generator](#) fuel is expensive and increasingly rare, which is where the solar panel generator comes in.

It trundles around the city, powering the [water](#) pumps residents use to draw supply from underground wells, and helping fill the electricity supply gap.

"The most important thing for a family is to secure water. A house without water is a house without life," said Abu Mohammad Ahmad, an engineer and local council member who supervises the project.

The generator is a simple set-up, just 12 [solar panels](#) and six batteries mounted on an iron cart.

The panels each have a capacity of 100 watts a day, and are also used to power the batteries, which serve as a back-up on days when the panel supply is low.

The project supplies local schools, as well as mosques and communal water tanks.

As the cart is pushed and pulled to its next destination, residents weave around it on bicycles, which have become a favoured mode of transport in the city because of the fuel shortages.

Arriving at a blue communal water tank, one of the generator's operators unfurls a cord from the device and connects it to an electric pump.

Soon the chug of the pump is accompanied by the splashing of water filling up the tank.

A boon for locals

Local residents arrive with buckets and big plastic bottles to fill up.

Nearby stands Abu Akram, 52, who once owned a minimarket but lost his livelihood when the shop was destroyed in bombardment.

"This is the most successful project in the Ghouta region," he told AFP over the gush of water.

"We used to draw water by using generators, but we're besieged, and fuel is hard to find and very expensive," he added.

He and his neighbours would sometimes club together to buy a single litre of fuel so they could pump up enough water to fill a tank.



A mobile solar generator, here seen on June 7, 2017, is providing power to schools and mosques in Syria's rebel-held town of Douma

"But this project is free and it has helped us a lot," he said.

The project grew out of the failure of a previous local council initiative, under which 13 schools were provided with solar panels.

"Some of the panels were stolen, so we ended up removing them and putting them in storage," said Ahmad, as an employee cleaned the panels behind him.

When the idea was born for a mobile solar generator, they were dug out of storage and strapped to the iron cart, which was built out of the remains of vehicles damaged in bombardment.

A single panel costs \$200 and each battery \$240, but the set-up also requires an inverter device that costs around \$600.

"The more solar panels we could have, the better," said Ahmad, adding that the cart was designed to carry up to 24.

'God will reward them'

Ahmad would like to see the project which began about a month ago expanded to help Douma's approximately 50,000 residents, though costs and availability so far have made it impossible.

"If we get the capacity, we have plans for between 20 and 50 vehicles, which would cover 22 neighbourhoods and secure about 70 percent of the city's water needs," he said.

At a local school, headmaster Bashar, 54, describes the project as "a major improvement".

"Before we used to run the generator and it made so much noise," he said, standing by a wall with a tree painted on it.

"It was really exhausting. Sometimes the generator would work, sometimes it wouldn't. Sometimes we'd have fuel, and other times not."

"Now the solar panel cart comes in and we fill up the water tank, and no one even knows it's here. It's great."

At a local mosque, Abu Mohammad Badran, who calls believers to prayer, is delighted by the [project](#).

Muslims perform ablutions before prayer and mosques are usually outfitted with taps to allow them to do so.

"We were really struggling to have water in the mosque. It was so expensive," he said.

During the holy month of "Ramadan we need even more, because the number of people coming to pray is much greater," he added.

"If they fill us up with enough water for a day or two, God will reward them."

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