Mobile Solar Solution Provides Access to Clean Water and Emergency Power

2023-04-15
Sesame Solar's mobile nano grid and onboard water filtration system can be set up in 15 minutes.

Sesame Solar, a U.S.-based startup in the renewable sector, aims to provide renewable energy even in the face of disasters. Its mobile nano-grid solution can also be used to stay off the grid in remote areas. All it needs is sunlight and water.

When a natural disaster strikes, power and water ae disrupted. Until grid-based power can be restored, generators are often rushed to the site. Powered by fossil fuels, these contribute to carbon emissions. At a time when natural disasters are common, Sesame Solar has a simple solution to keep the diesel generator at bay.

A single unit of this versatile nano grid can cost between $100,000 to $375,000

The trailer-like solution could be easily dismissed for a food truck or mobile office. But one only needs to press a button and dramatically say "Open Sesame" to see the electronic controls unfold the retractable solar walls and reveal the engineering marvel that the mobile nano grid is.

The solution arrives in a ready-to-use format and can be quickly deployed by a single person in about 15 minutes, the company's website says. The solar panels charge the onboard batteries and can provide anywhere between three to 20 kilowatts of energy. This could be used to supply power to households or a disaster relief center. The company estimates that in a single day's charge, a nano grid can power 650 laptops and 2,500 phones.

Additionally, the grid is also equipped with an onboard water filtration system that can be deployed to provide 132 gallons (500 liters) of drinking water every day. Since power disruptions are also likely to affect cellular connections, the grid can also provide 5G connections to help people get online and connect with their loved ones.

The nano grid also uses solar energy to split water and store the hydrogen gas to serve as a reserve fuel when the onboard battery capacity dips below 35 percent. Alternatively, it can be used when the power demand surges or the weather is not conducive to solar energy generation.

Users do not have to wait for a disaster to strike to be able to access a nano grid. Sesame Solar is also working to provide its nano grid to customers who are looking to live off the grid or simply for a mobile office or a last-mile service center for businesses engaged in agriculture, education, or other industries.

If training or maintenance is needed, the company suggests doing so remotely with augmented reality solutions. A single unit of this versatile nano grid can cost anywhere between $100,000 to $375,000.

Read the original article on Interesting Engineering.