



SolarGEM[®] by Akuyo
Green Energy in Motion

SolarGEM®

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Mobile

A completely containerized solar solution built for mobility, remote sites, and off-grid. SolarGEM® is certified for international transportation and can be installed or relocated on almost any terrain.



Economic

Plug SolarGEM® directly into your existing network and reduce fuel dependency by up to 60% from day 1.



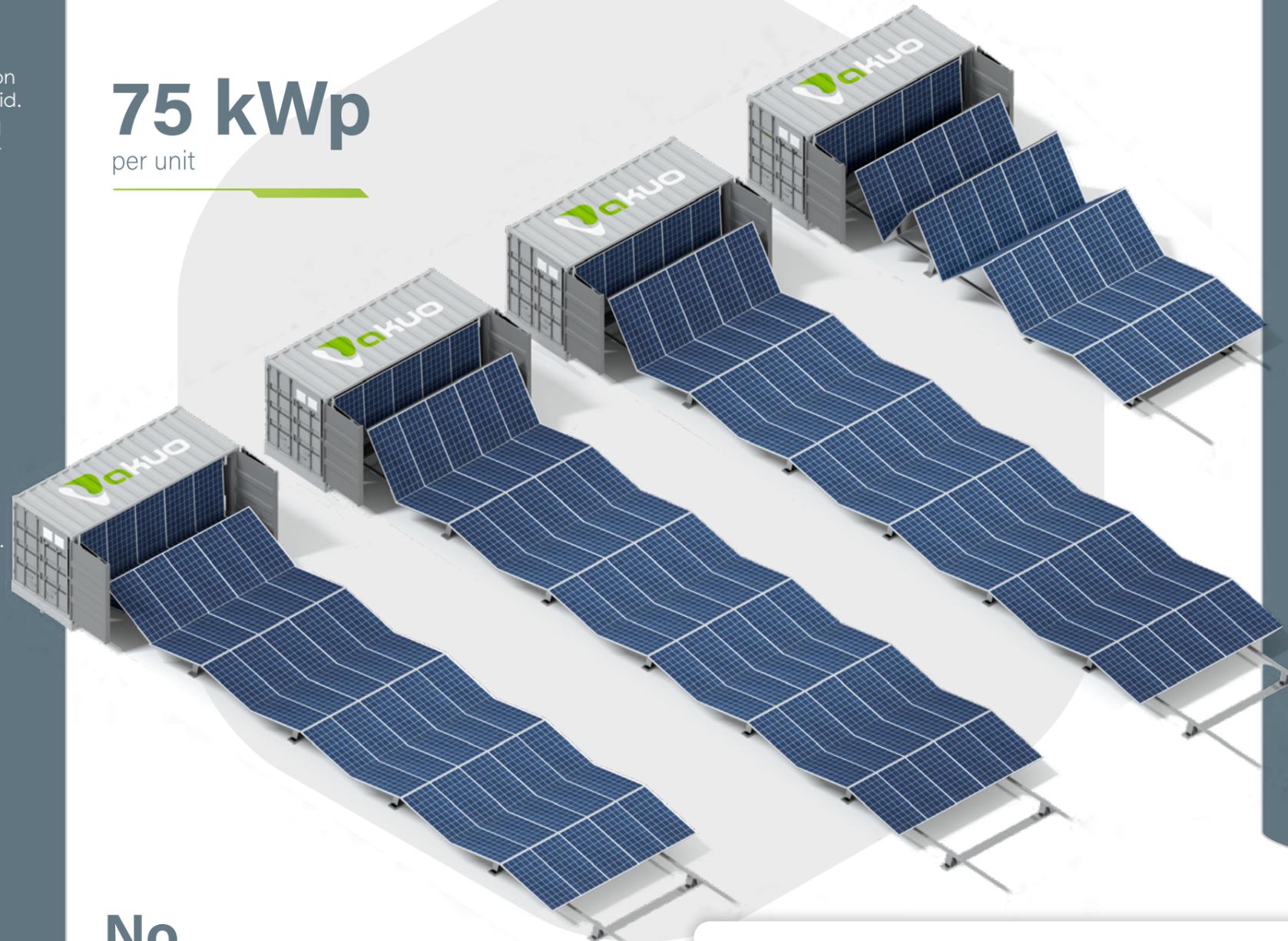
Plug & Play

We provide a ready-to-use solar plant, with no construction needs. This fully pre-wired solar plant comprises solar panels, the mounting structure, as well as an inverter and electrical panel. SolarGEM® is ideal for quick deployment on- and off-grid.

1 MWp
installed in one week

Available
for immediate delivery

75 kWp
per unit



Robust

The system is designed to withstand extreme environments and has been tested under hurricane conditions. Solar panels are framed with galvanized steel reinforcements. They can be quickly folded back inside the container during the most severe storms.



Scalable

SolarGEM® is a >75kWp modular solution, scalable to any capacity. Connect as many SolarGEM® units as you need to create a truly mobile solar power plant, without any technical or power limitations.

No
Construction need



Akuo's storage system

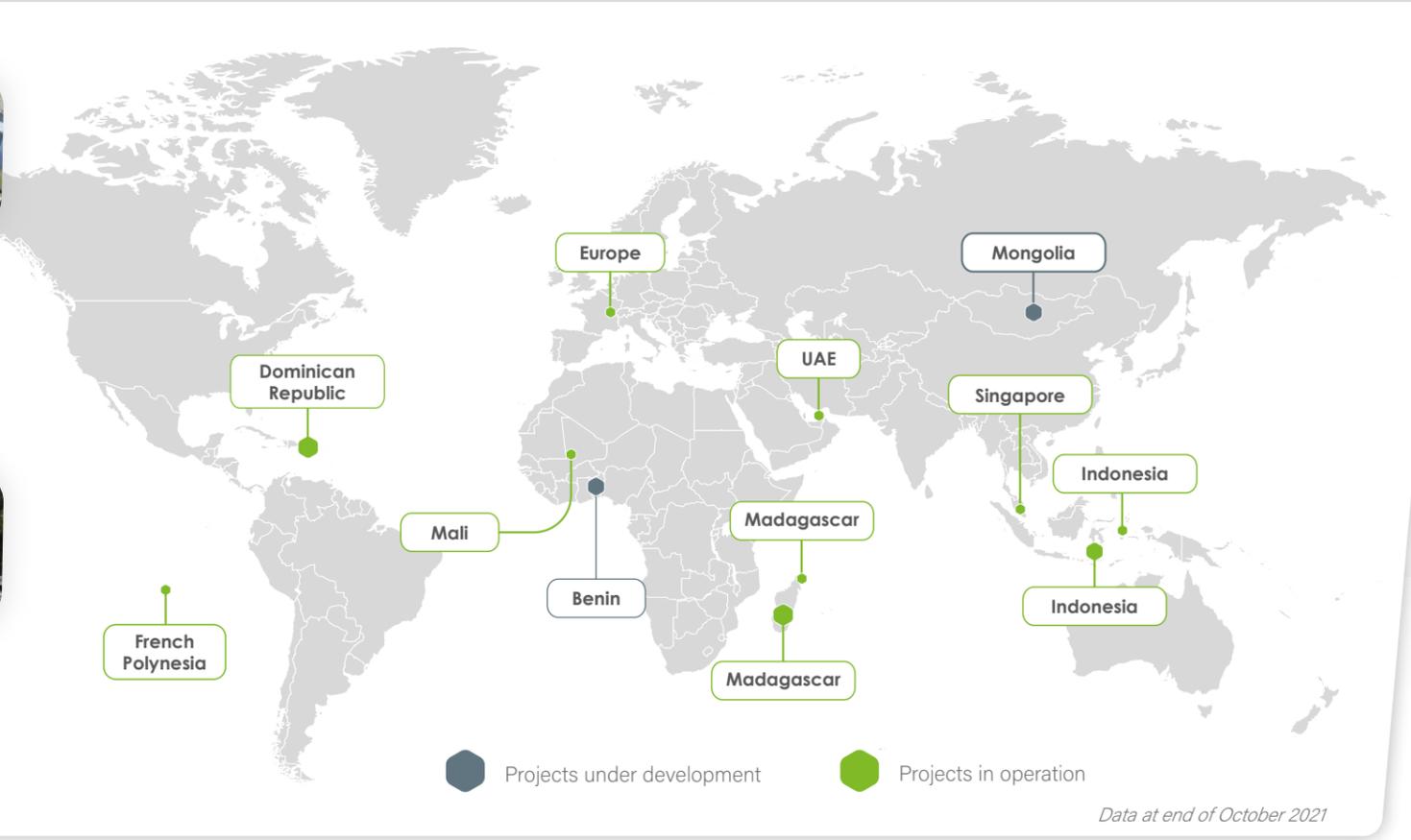
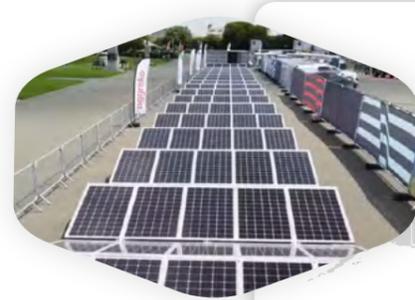
Storage & EMS compatible

SolarGEM® is designed to be compatible with any storage or EMS system. Adding Akuo's batteries to SolarGEMs® significantly increases the share of renewable energy in the mix.

Applications

Operations in off-grid areas are largely powered by diesel. This has a high environmental and economic cost.

SolarGEM® has been designed to provide operators with an elegant and cost-effective solar solution.



Example of a mining project



A mining company with 5 MW of electrical load powered by diesel generators implemented 4.8 MWp of SolarGEM® solution on their existing mini-grid network.

From Day 1, the SolarGEM® system allowed the company to **cut fuel expenses by 24%**.

By reducing CO₂ emissions, the company will save an **additional \$225 000 per year thanks to CO₂ certificates**.

Further benefits include a substantial **decrease in noise pollution thus improving employees' well-being and reducing the impact on biodiversity**.

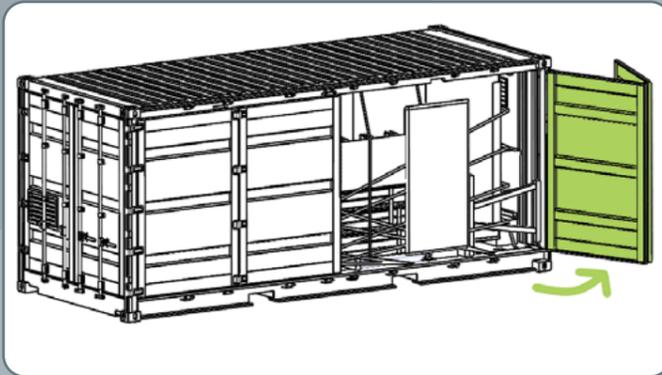
In addition to the SolarGEM® system, **4.1MWh of Akuo's storage batteries could increase the proportion of renewables in the energy mix to up to 31%**, which would imply an equivalent reduction in fuel consumption. The solar system can be fully adapted to the company load without any additional cost of construction or grid connection.



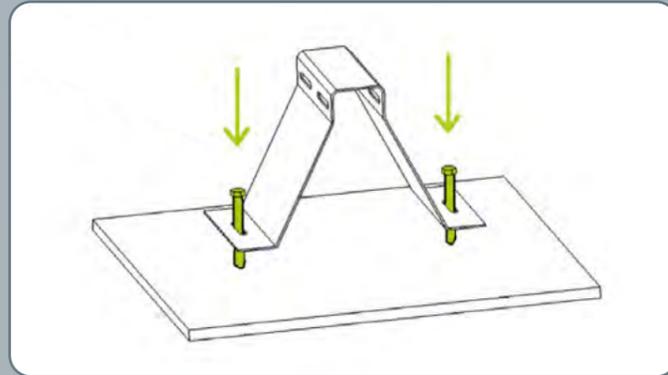
From permanent mini-grid for communities, to temporary and ultra mobile industrial operations, SolarGEM® is a smart piece of the clean energy solution.

	Low power (75kWp-1000kWp)	Medium power (1000kWp-5000kWp)	High power (>5000kWp)
Permanent plant (>10 year)	3 green hexagons	2 green hexagons	1 green hexagon
Mobile plant (2 to 10 years)	3 green hexagons	3 green hexagons	2 green hexagons
Ultra-mobile plant (couple of weeks)	3 green hexagons	1 green hexagon	1 green hexagon

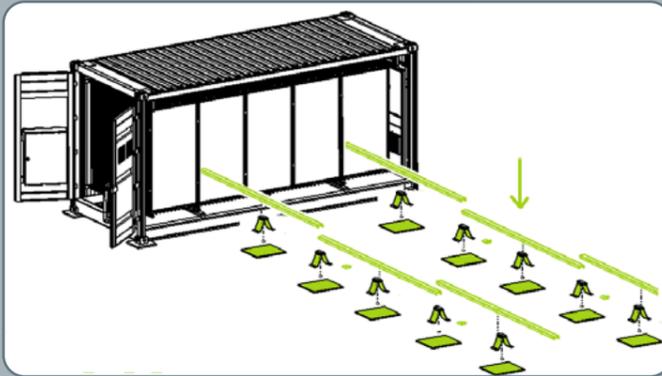
Easy installation



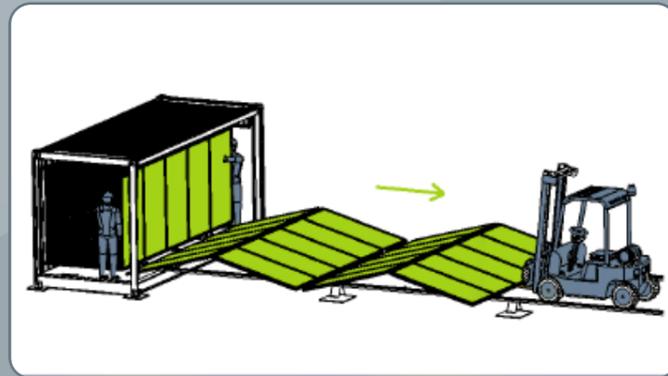
1. Open the container



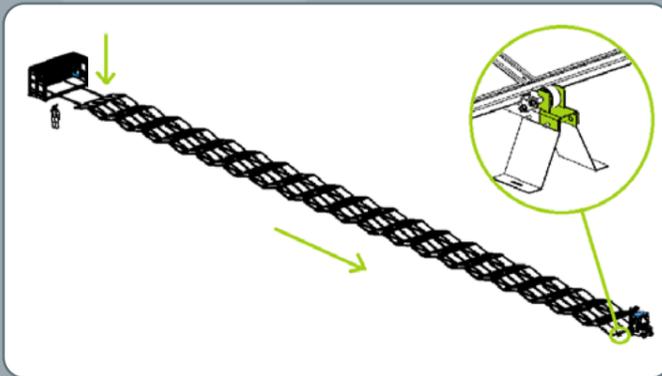
2. Prepare the rail supports (no civil works needed)



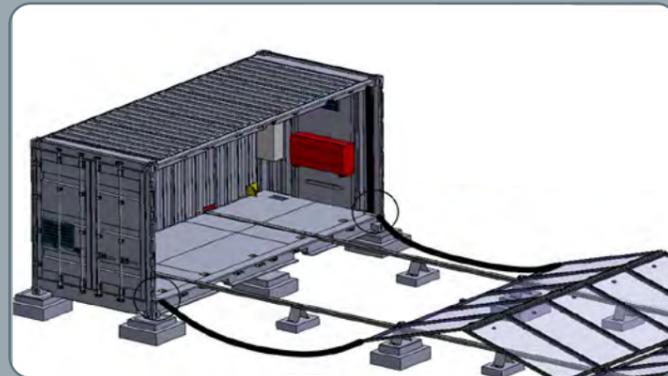
3. Install the rails



4. Pull the modules out with a forklift or a car



5. Install a 65kg ballast on each side of the system



6. Plug your module directly into your existing network



Watch the full installation process :



Datasheet

Features	
Solar capacity	75 kWp
Items	200 panels x 375 Wp 1500 VDC 1 inverter 60kVA and AC cabinet fully pre-wired
Container weight	12,5 metric Tons
(Un)folding time	30-45 mn
Operating Temperature	-20 °C to +60 °C (-13 °F to +140 °F)
Rated Output Current	91.2 A @380 Vac 86.7 A @400 Vac
Max. Output Current	100 A @380 Vac 95.3 A @400 Vac
Communication protocol	Data interface: Modbus Interface: RS485, webconnect
Unfolded footprint	L. 90m x W. 6m x H. 1m (H 2.6m for the container)
Folded footprint	L. 6.1m x W. 2.4m x H. 2.6m (20ft Dry)
Slope Limit	< 0.6% No need for leveling
Complete installation	3 hours with a team of 4 people
Robustness	Constructed to resist transportation by sea or truck Longevity tested in extreme real-world conditions (such as hurricanes)
Compatibility	Connection to low or medium voltage Compatibility with most 72 cells PV modules Option for a DC output without inverter
Orientation	Any azimuth
Module Tilt angle	15°
Frames material	Hot dipped galvanized steel (ISO 1461 standard)

In 2018, the SolarGEM® was awarded the Efficient Solution Label by the Solar Impulse Foundation and received a perfect score on all environmental and socio-economic criteria.

"The SolarGEM® is one of the very first solutions labeled by the Solar Impulse Foundation. It is the embodiment of a smart innovation to tackle climate change while remaining economically profitable. Developing this technology for those who need electricity in remote places or off the grid is a fundamental way to reduce their dependence on fossil fuels."

Bertrand Piccard,
Explorer, Founder of the Solar Impulse Foundation





Akuo is an independent global renewable energy power producer and developer. The company is present across the entire value chain, including project development, financing, construction, and operation. As of end 2020, Akuo had invested more than EUR 2.6 billion for a current total capacity of 1.3 GW in operation or under construction and had over 5 GW of projects under development. With more than 350 employees, the Group, headquartered in Paris, France, has a presence in over 15 countries around the world.

In 2016, Akuo launched the SolarGEM® to provide a mobile, scalable and easy to install solar solution. With already close to 10MWp of installed SolarGEM® throughout the globe as of 2021, this patented technology has become a reference in the solar world. In addition to its commitment to innovation and the environment, Akuo provides expertise and support to its clients on design, construction and operation of their mobile solar solution.



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