

Solar energy: “Ensuring a minimum supply in vital areas”



E-scooters and electric tricycles from China currently dominate traffic in Cuba (source: [Granma/KI-scaled](#))

The [US energy blockade](#) has been cutting Cuba off from access to fuel for months. Transport, healthcare, and electricity supply [are increasingly coming to a standstill](#).

A German solar engineer is working on industrial plants and emergency power solutions for private households in Havana. Solar energy ensures a minimum supply for hospitals, schools, and households. Electric tricycles and small PV systems help to maintain mobility and everyday life. International support and [solar kits](#) could bring a degree of stability to many people.

Telepolis talks to engineer Martin Müller, who prefers to use a pseudonym due to the high risk of sanctions.

► You work as a solar engineer in Cuba. What projects are you involved in?

Müller: I am mainly involved in industrial projects between 50 kilowatt peak and 400 kilowatt peak. Not in the megawatt range, not in large solar parks, but everything below that: in mid-range, industrial projects.

Since last year, however, I have also been involved in the private household sector: among acquaintances, among friends who have suffered more and more from the prolonged power outages. We have started to build replacement and emergency power systems for houses, using batteries.

► **Since the US attack on Venezuela on January 3, Cuba has been subject to a drastically tightened naval blockade by the US, especially with regard to oil supplies. How do you assess this development?**

Müller: Donald Trump wants to put pressure on the Cuban government. The oil blockade has been tightened to an extent never seen before. People in Cuba were already used to a lot, but now many things are being slowed down and made even more difficult.

Many people are unaware that such embargoes cause great damage in a silent way. This is particularly evident in Gaza. Above all, the long-term consequences should not be underestimated.

► **How is the tightened blockade noticeable in everyday life? What is the main shortage?**

Müller: There is a particular shortage of gasoline, diesel, and jet fuel, i.e., refined fuels that Cuba cannot produce itself. Planes coming from Europe can no longer refuel here and now have to take detours via Panama or other countries.

The Máquinas, the old-timers, a traditional means of transport in Cuba, mostly run on diesel. They are now also at a standstill. Trucks, which are very important for transporting goods between provinces, are affected. So are the ships in the harbor.

What you now see more and more on the streets are electric triciclos (three-wheelers). The street scene has changed dramatically. Cubans are very efficient in this regard. Triciclos don't need much energy and can transport many people and goods. Admittedly, only over shorter distances, but still.

Despite these countermeasures, many things and people are no longer getting where they need to go. This is particularly dangerous for sick people and those who need medication.

► **What role does solar energy play in the fight against the blockade?**

Müller: In Cuba, it is now particularly important that social services do not collapse completely, but at least continue to function at a lower level. Kindergartens, schools, and hospitals must continue to operate. Solar energy can ensure a minimum level of service in vital areas.

Solar energy is particularly well suited for charging small, lightweight vehicles. They don't need as much electricity as an electric car in Germany – perhaps only a tenth of that. Every solar system generates a certain amount of kilowatt hours per day, which ultimately also represents an oil equivalent.

I always say: one kilowatt hour of solar power is one glass of diesel. Each of these



systems is a drop in the ocean – but constant dripping wears away the stone.

► **What goods are currently needed most?**

Müller: All of them. Especially those needed for unloading and transporting goods. That's the key point.

► **What can be done to support you?**

Müller: You can support Cubans who cannot yet afford to invest in their own solar systems. You can finance them or send them so-called solar kits from abroad.

With 3 kilowatts of power and 5 kilowatt hours of storage, you can already provide a house with basic power. Not always with air conditioning, but at least with a refrigerator, light, and fan. In general, any shipment of relief supplies by container is helpful.

The world can learn a lot from Cuba's solar revolution. The blockade is jeopardizing it. That should not be accepted.

Benjamin Roth spoke with Martin Müller (pseudonym). He works as a solar engineer in Cuba. Donations for solar kits are collected by, among others, [Cuba Sí](#), the [Friendship Association BRD-Cuba](#), [Interred](#) and the [KarEn Association](#). (Telepolis) ([Cubaheute](#))