How Cuba plans to escape its energy crisis

Solar park (symbolic image): Cuba is planning to rely heavily on renewable energy sources to overcome its current energy crisis (source: American Public Power Association/Unsplash)

A lack of electricity has had the Cuban population and economy in a constant stranglehold for four years now. Of all things, a trade fair for renewable energies is taking place in Havana, where the situation is particularly critical: yesterday, Wednesday, the national energy supplier Unión Eléctrica estimated the generation deficit at 1390 megawatts. How does Cuba intend to counter the crisis?

Large parts of the country in the dark

First of all, the current situation: With deficits in the high three-digit range, the energy situation is already critical. The latest figure means that only 60 percent of the peak demand of 3250 megawatts can be covered. With deficits in the four-digit range, large parts of the country are left in the dark or have to deal with long-lasting daily power cuts, while industry comes to a standstill.

The cause of the tense situation is the combination of the poor technical condition of the power plants (which have exceeded their planned operating time for years, which is why some are damaged) and the lack of fuel due to the tense budgetary situation. This, in turn, is a consequence of the ongoing US sanctions, as well as the slow recovery of tourism, insufficient reforms, mismanagement, and the resulting multidimensional crisis that Cuba has been facing since around 2020.

“Significant problems”

Most recently, Energy Minister Vicente de la O Levy gave a detailed overview of the current situation in a special broadcast earlier this month. According to him, the most important planned maintenance work was carried out in the first half of the year despite limited resources – however, there were “significant problems” with the availability of fuel, according to O Levy. Unlike a few years ago, the country no longer has the capacity to purchase cheap crude oil and refine it locally. As a result, it is simply not possible to operate the decentralized generator units, which are used to support the large crude oil power plants from Soviet times, to the extent required.

And even maintenance measures cannot fundamentally solve the problems: “A 100 MW unit now only generates between 70 and 80 MW. The sum of all these deficits is in the order of 400 MW, due to the years of operation and the lack of spare parts. The maintenance we carry out serves to keep them [the power plants] 'alive', but we are not bringing them back to zero kilometers, as the saying goes,” explained the minister. Recently, there have been failures at the Felton and Céspedes power plants in the provinces of Holguín and Cienfuegos. In addition, the hydraulic pump failed at the Guiteras power plant in Matanzas, which was built in 1988 and is the youngest and most powerful in the country.

400 solar megawatts by the end of the year?

According to O Levy, one short-term solution is to expand decentralized generators. Cuba recently received support in this area from China, which donated 10 generators with a capacity of 18 megawatts. However, the limiting factor remains the availability of fuels such as diesel. According to the minister, Cuba currently consumes eight million tons of fuel, three million tons of which could be produced in the country itself. “We had secured the rest of the fuel in various ways (alliances, agreements, long-term deliveries, financing), but today we no longer have this option, which is why we have to purchase the missing five million tons on the world market,” said O Levy.

The only sustainable solution for Cuba is therefore the massive expansion of renewable energies, especially photovoltaics, which is relatively inexpensive and quick to install. As part of this strategy, Cuba plans to build a total of 92 new parks with 2000 megawatts of solar power by 2028 – currently, the share of renewables is less than five percent. As the party newspaper *Granma* reports, the components for the first two large parks, each with 21 megawatts, arrived on the island in the past few days. From now on, “important new deliveries” are to reach the island every week, so that the first 400 megawatts will be fully installed by the end of the year. It remains to be seen whether this will be achieved. So far, the Ministry of Energy has remained silent about the project's financing and partners.

The framework conditions for private individuals and companies in the field of renewable energies have also improved in recent years – albeit rather late, according to some observers. In 2021, customs duties on private imports of solar panels were abolished, sales to the population started and a rudimentary feed-in tariff introduced. Investors in the renewable energy sector enjoy tax breaks. And although restrictions have been tightened in some areas as part of the latest reform of private sector laws, there have been relaxations in the renewable energy sector: private companies are now not only allowed to generate

electricity from renewables, but also to sell it to the state and other businesses, as well as to offer charging stations for electric vehicles.

In any case, O Levy was confident that, thanks to the solar program, by 2025 for the first time there will be a minute when Cuba will not have to consume imported fuel, which would bring a noticeable improvement in terms of the generation deficit. In the following years, this should lead to hours, days and weeks of energy sovereignty – a first step on a long and rocky road, but one that Cuba sees as the only sure way out of the energy crisis. (Cubaheute)