NOIZZ

A Pole has a bitcoin excavator for solar panels. He earns and does not pay

Paweł Wojciechowski told us about a bitcoin miner powered by a photovoltaic installation. A resident of Gniezno has also developed a solution thanks to which the heat generated by this device can be used, among other things, to heat water at home.

Michal Bachowski

A Pole has a Bitcoin excavator for solar panels. He earns and does not pay

Paweł Wojciechowski's bitcoin miner needs 38 kWh of energy per day, an average fridge consumes about 0.8 kWh during this time

To reduce energy costs, our interlocutor decided to build a photovoltaic installation

Paweł also managed to use the heat generated by the excavator to heat the water in the house and support the heating system

More similar texts can be found on the Onet homepage

The climate ministry wants all Poles who will install solar panels from 2022 to sell surplus electricity to energy trading companies, and in periods of shortage buy it from them. Such a proposal for changes in the regulations meant that there was a lot of talk about backyard **photovoltaic installations** , of which there are already over 300,000 in our country.

see also

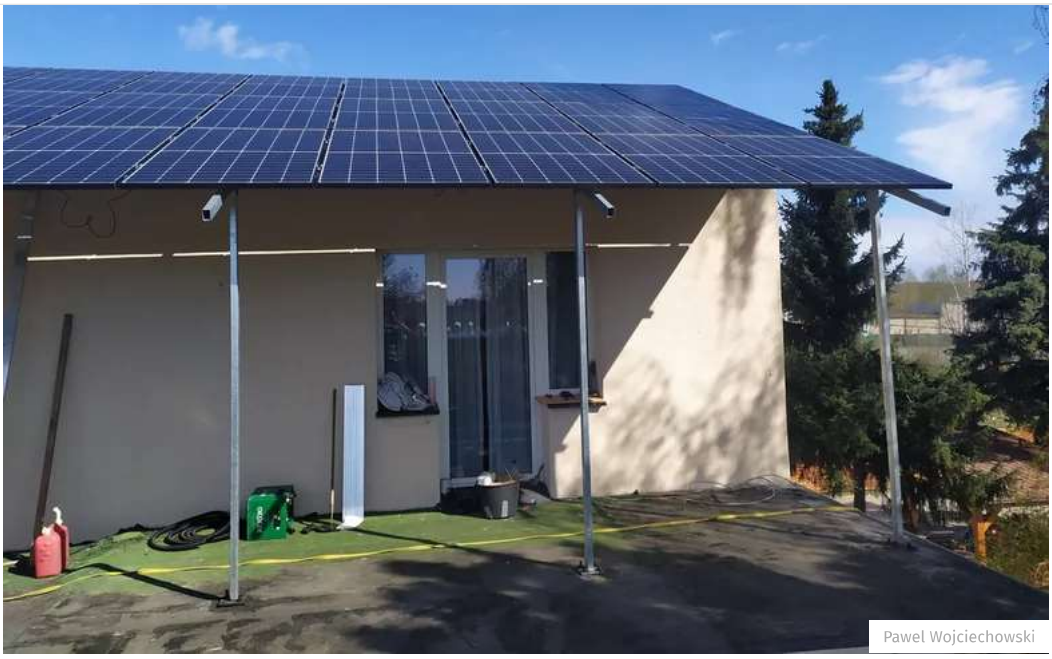
Changes in photovoltaics do not have to be bad. The expert gives the condition

Changes in photovoltaics do not have to be bad. The expert gives the condition

Company representatives warn that the new rules will extend the payback time of this type of investment from 5-6 years to 7-8 years, which will stop the development of the industry and eliminate many smaller players from it. On the other hand, Poles, who previously only thought about their own photovoltaic installations, are now in a hurry to make it before the introduction of possible changes and gain the status of prosumers (the increase in demand is also associated with the next edition of subsidies under the My Electricity program, which is to start on July 1) . . We have already written about this situation in Noizz, among others, in the context **of threats**associated with rushed installations. While looking for heroes for one of the materials, we accidentally came across Paweł Wojciechowski. A resident of Gniezno told us about his installation, which is to have a power of 20 kWp when completed. The most interesting, however, is its unusual purpose, which you can read more about in the interview.

Why do you need a photovoltaic installation with such a high power?

Paweł Wojciechowski : The power of the installation depends on its energy consumption. I own a bitcoin miner and run an IT company, so there are a couple more computers at home, two servers and some miscellaneous electronics. Therefore, my consumption is much higher than in the average household. At the moment I have 31 panels on the roof with a total power of 9.9 kWp. The second number of panels are already waiting for installation, because ultimately I need almost 20 kWp. For comparison, my friend is now doing a standard photovoltaic installation in his house, which will have 4.5 kWp and it is enough for him.



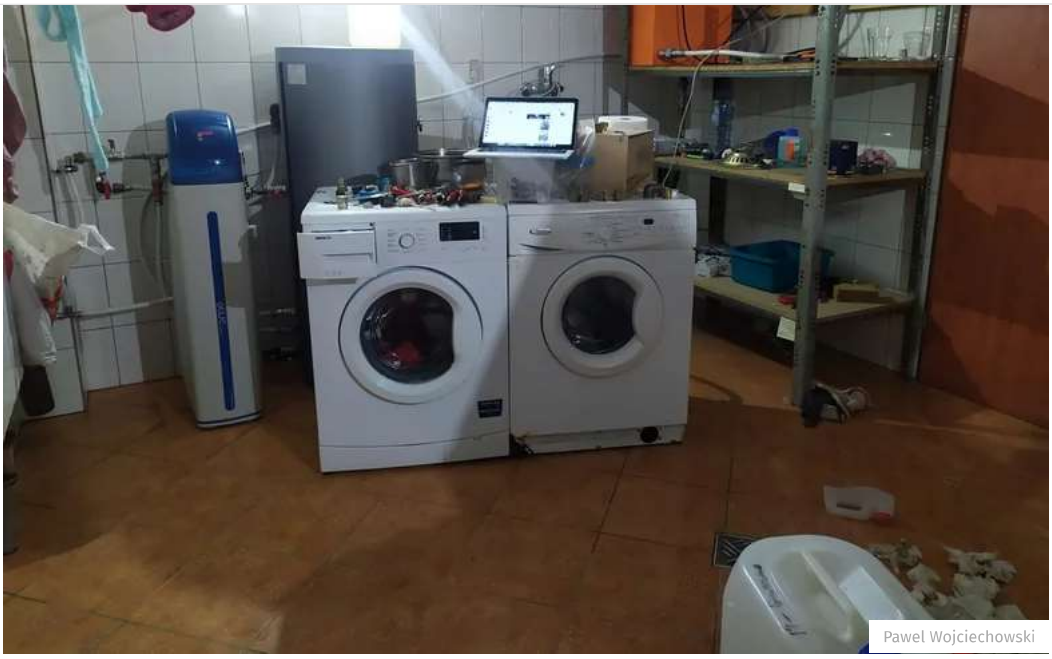
The first part of Paweł Wojciechowski's photovoltaic installation

Will such an installation provide you with energy independence?

If the weather is very good, the photovoltaic installation installed on my roof produces almost 68 kWh. My bitcoin miner consumes a lot of energy - about 38 kWh per day (a refrigerator, which is one of the most "energy-hungry" household appliances, needs about 0.8 kWh per day - editor's note). If we add other devices to this, in the summer I go practically to zero. As a result, I do not pay for electricity and still earn on cryptocurrency. However, the surplus of energy that I give to the grid is very small, so I will have almost nothing to collect in the winter. I will achieve complete energy independence only when I have installed all the panels and doubled the power of my installation.

Tell me more about your bitcoin miner and how it works with home installations.

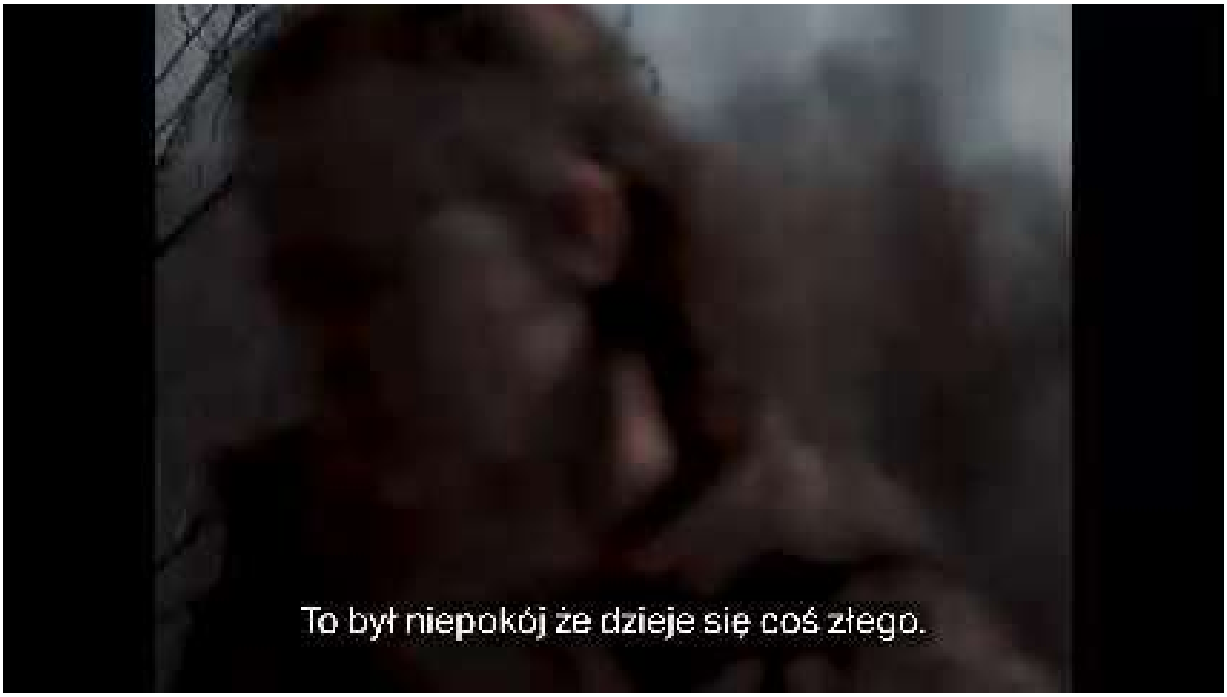
In fact, it's just a computer with highly specialized electronics that mine bitcoins by computing one complex cryptographic hash function (SHA256) used for that cryptocurrency. The energy that the excavator consumes non-stop turns into heat, which is why this device gets very hot and howls terribly. The first cryptocurrency miner that came to me was bought by a friend who, being a student, wanted to run it in his dorm room. However, it was so loud that after two days it ended up in my garage and even in winter it heated its interior to a temperature of 16 degrees C. You had to spend over PLN 700 a month on the energy needed to operate it. It didn't make much sense, though, because she was earning about half that amount. That's why I started to wonder how it could all be optimized better. From the beginning I thought about a photovoltaic installation to reduce energy costs, but I also decided to use the heat generated by the equipment more efficiently.



Paweł Wojciechowski's laundry room with a bitcoin miner in an orange casing

So when I bought my excavator, I installed it in the basement where my house has a laundry room. She dried the laundry perfectly, but howled so loud you could hear her everywhere, even upstairs. I dealt with this noise by immersing it in a special liquid. This is my original solution, which I spent several months on, because I wanted it to be a liquid that is safe not only for electronic equipment, but also for humans. This way I managed to silence the bitcoin miner completely, but it's not over yet. The device transfers its heat to the aforementioned liquid, which I then pump to two tanks with utility water, heating it to 35-45 degrees Celsius. In the summer it does not turn on at all, so we have zero gas consumption, unless by some miracle the temperature of the water in the tanks drops below 30 degrees C. In addition, some of the heat generated by the excavator goes to the radiators, supporting the operation of the heating system in the autumn-winter-spring season. Partially heated water also goes to the washing machine or dishwasher, which therefore consume slightly less energy.

You can read the rest of the interview under the video:

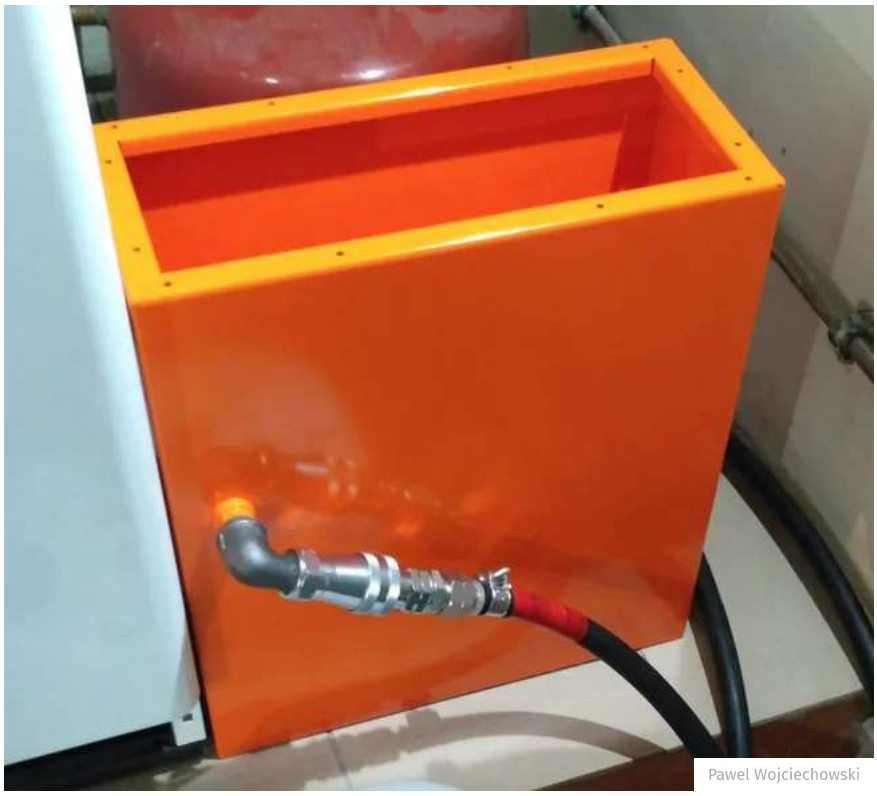


How much did you have to invest in all this?

at the moment.

When it comes to the photovoltaic installation, the whole thing, together with the necessary equipment, structure and panels still waiting for assembly, will cost something like 50-55 thousand. zloty. If I had used the services of the crew, I would have paid about 40,000. PLN more, but I do the assembly myself. Thanks to this, I save a lot, although I do not count my time here at all.

It's hard for me to count how much I spent on this proprietary solution for silencing the excavator and heating water with the heat generated by this device, but it was certainly not more than 4,000. zloty. I'm not counting the tools and the first prototype I built here.



Pawel Wojciechowski

Paweł Wojciechowski silenced the bitcoin miner by placing it in a special liquid

Have you used government subsidies and reliefs for photovoltaics?

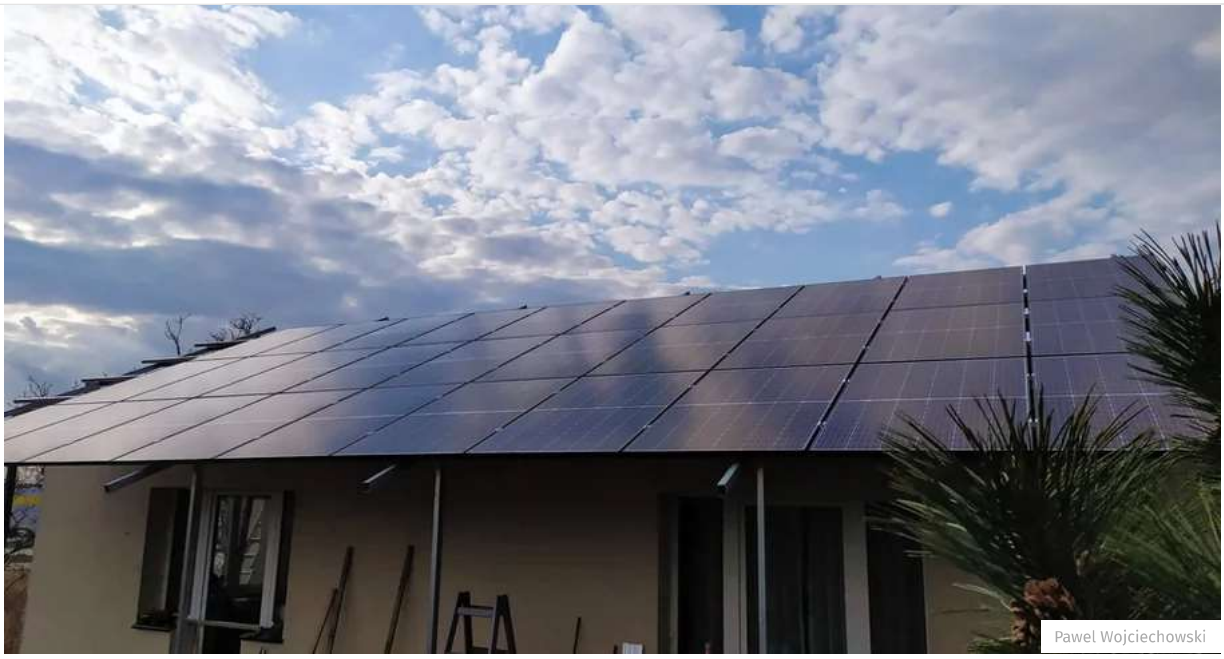
I launched the first part of the photovoltaic installation this year, so I will be submitting an application for funding from the My Electricity program, which starts in July, soon. I'm still waiting for thermal relief.

Aren't you afraid of new regulations?

The changes will not affect me, because I am already registered as a prosumer and according to the authorities' announcements, I will have peace for the next 15 years.

How long will it take you to pay back your entire investment?

When the whole thing starts working, I will save about 1,000 on electricity bills alone. PLN per month. I also save on gas. In summer I do not pay for it at all, and in winter a little less, because I use the heat generated by the excavator to heat utility water and support the heating system. Just looking at it, everything should pay off after 4-5 years, but there are also earnings from the excavator, which of course depends on the bitcoin exchange rate. At the moment, she's "mining" the equivalent of about PLN 350 a month, but I don't want to exchange it for money because I treat cryptocurrencies as a long-term investment. I have been watching this market for a good few years and I am convinced that the value of bitcoin will increase in the long term. Well, unless there's a vulnerability in his security system or quantum computers, that can break all cryptography. However, this is currently still unlikely. I sleep peacefully, looking for new innovative solutions.



Pawel Wojciechowski

Click to close and return to the home page