POLAND

# The carbon free revolution starts from the ground

By Bruno Zanzottera

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Warsaw region, Poland - Joanna Pandera, president of the Forum Energii Foundation, at work in her home in the countryside outside Warsaw. After the start of the war between Russia and Ukraine, Joanna transformed her home by equipping it with a heat pump and photovoltaic panels.


Szczytno, Poland - A Soviet-era housing unit that has been regenerated with photovoltaic panels on balconies and roof and a heat pump system for heating and cooling.

# In Poland the decarbonization began from the associations of residents in the Soviet-era blocks long before the war in Ukraine

Something started to move when Russian aggression against Ukraine was not even conceivable, coal in Poland was a cheap source of heating, and state subsidies for energy transition almost did not exist. The Polish road to decarbonization started from the ground, from the associations of residents in the tens of thousands of prefabricated Soviet-era blocks scattered all over the country. First, they reduced consumption by insulating the outer walls of the buildings. Then they gave up coal altogether, producing hot water for heating and domestic use through geothermal heat pumps, installed in the communal gardens and powered by solar panels mounted on the roofs or balconies. Therefore, amidst a flurry of initiatives, new companies emerged – while others converted, sensing the wind – to produce heat pumps domestically and build small power plants capable of heating entire neighborhoods. When the war in Ukraine and the embargo on Russian fossil fuels finally sent energy prices soaring, it was boom. Thus, a traditionally coal-producing nation finds itself among those with the highest growth rates in the decarbonization process. And now, after the people, even the government seems to be starting to believe it.

**This work is part of a project on the eco-efficiency of housing carried out in collaboration with the European Climate Foundation.**

Ceglowo, Poland - Ewa Adamowicz (83) in her home, which is part of the Soviet-era Ceramik housing units that have been regenerated with photovoltaic panels and heat pump systems.

Zwolén, Poland - Kamil Kwiatkowski, director of research projects for the Euros Group, checks the heat pumps in one of the Soviet-era housing units that have been regenerated with photovoltaic panels and heat pump systems.

Bartoszyce, Poland - Wojciech Sienkiewicz (45), president of a group of Soviet-era housing units that have begun the process of ecological renovation with photovoltaic panels and heat pump systems.

Lidzbark Warmiński, Poland - The reservoir containing the water that will serve as storage for the experimental Heating Pump of the Future plant, which is currently under construction; once completed, it will be used to heat several housing units

Zwolén, Poland - Inhabitants of one of the Soviet-era housing units that have been regenerated with photovoltaic panels and heat pump systems.

Giubczyce, Poland - Robert Galara, executive vice-president of the Galmet company, which makes and assembles heat pumps, checks the construction of a heat pump tank with a worker.

Zwolén, Poland - A resident of one of the Soviet-era housing units that have been regenerated with photovoltaic panels and heat pump systems.

Lidzbark Warmiński, Poland - Workers at work on the embankment containing the water reservoir that will serve as storage for the experimental Heating Pump of the Future plant, which is currently under construction and, once completed, will be used to heat several housing units.

Bartoszyce, Poland - A series of Soviet-era housing units that will be regenerated with photovoltaic panels and heat pump systems.

Giubczyce, Poland - A robotic production stage of the Galmet company, which makes and assembles heat pumps.

Ceglowo, Poland - The photovoltaic panel wall of one of the Soviet-era Ceramik housing units that have been regenerated with photovoltaic panels and heat pump systems.


Ceglowo, Poland - The control panel of a heat pump for Soviet-era Ceramik housing units that have been regenerated with photovoltaic panels and heat pump systems.


Lidzbark Warmiński, Poland - Tomasz Walczak, CTO of Euros Energy, which is building the Heating Pump of the Future experimental plant; when finished, the plant will be used to heat several housing units. The new plant stands next to an old coal-fired power plant.

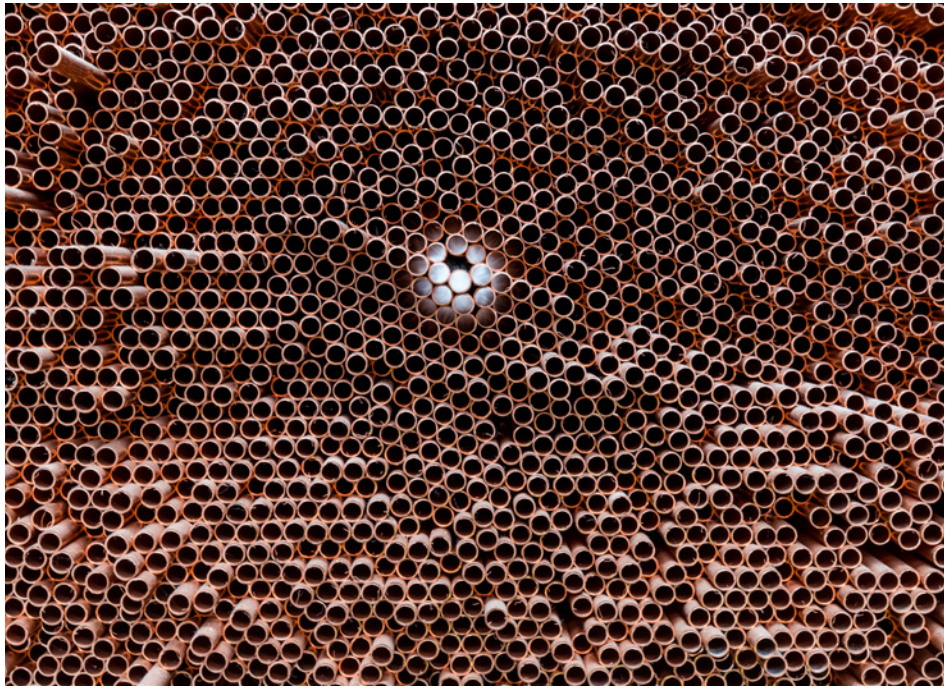
Bartoszyce, Poland - Wojciech Sienkiewicz (45) with his 17-year-old son Antoniusz.  Wojciech is the president of a group of Soviet-era housing units that have begun the process of ecological upgrading with photovoltaic panels and heat pump systems.

Bartoszyce, Poland - Drilling for the installation of heat pump sensors that will heat a group of Soviet-era housing units that will be regenerated with photovoltaic panels and heat pump systems.

Lidzbark Warmiński, Poland – Passages for underground pipes for the heat pumps of the Heating Pump of the Future experimental plant, which is currently under construction; once completed, it will be used to heat several housing units.


Ceglowo, Poland - Bozena Wasiak, a resident of the Soviet-era Ceramik housing units that have been regenerated with photovoltaic panels and heat pump systems.

Kleszczów, Poland - The large lignite mine and, in the background, the electric power plant in this village in the center of the country. To this day, many coal mines are still active in Poland.



Giubczyce, Poland - Copper pipes used by the Galmet company to assemble heat pumps.

Giubczyce, Poland - A production stage of the Galmet company, which makes and assembles heat pumps.

Zwolén, Poland - One of the Soviet-era housing units that have been regenerated with photovoltaic panels and heat pump systems.

Giubczyce, Poland - Robert Galara, executive vice-president of the Galmet company, which makes and assembles heat pumps, in the room where heat pumps are tested.

Bartoszyce, Poland - The window of a Soviet-era building. This is part of a series of housing units that will be regenerated with photovoltaic panels and heat pump systems.

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