



POLISH AND NORWEGIAN CITIES
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PV PLANT AT THE ŻAR MOUNTAIN IN MIĘDZYPRODZIE ŻYWIECKIE

Sector: Solar energy use

Timeframe: 2015

Location: Żar Mountain, Międzybrodzie Żywieckie, Poland



Photo: Piotr Kania

PROJECT BACKGROUND

Żar is the mountain in the mountain range of Beskid Andrychowski (eastern part of the Little Beskid belt), which rises over the Międzybrodzkie Lake. On the top of the mountain there is an upper reservoir of the pumped-storage hydroelectric power plant (Porąbka-Żar Power Plant), which belongs to PGE Energia Odnawialna and was put into operation in 1979. The high-head power plant, localised in Międzybrodzie Bialskie, has the capacity of 500 MW and the head of 440 m. It is the only Polish underground pumped-storage plant designed for regulating energy system during the peak and base loads. Short start-up time of the plant (180 seconds to start generation) also qualifies it for the intervention work.

The decision to build the plant on the Żar Mountain was based on its favourable topographic conditions: large head compared to the small distance between the reservoirs, as well as the possibility of using rehabilitated cascade of the Soła river.

PROJECT DESCRIPTION

On the top of the Żar Mountain in Międzybrodzie Żywieckie there is also the first 0,6 MW PV plant, which was put into operation by PGE in October 2015. The investment was carried out by the Maybatt company from Warsaw.

Żar PV plant, lying 740 meters above the sea level, is the highest situated PV installation in Poland. It comprises of 2 400 PV panels organised into 16 rows. Each of them has 250 W of capacity. The total surface of the panels comes to 3 500 m². Due to its localisation, the plant is protected by the special lightning protection installation composed of 200 masts, each having 4 meters of height.

It is estimated that PV plant on the Żar Mountain will generate minimum 550 MWh of electricity per year (gross value). The project fits into the PGE's business strategy, which foresees gradual diversification of energy generation sources.



Photo: Piotr Kania



FINANCING SCHEME

The investment was implemented by the PGE Energia Odnawialna S.A., a company which is part of the PGE Capital Group, where it is responsible for the RES sector. Construction of the PV plant on the Żar Mountain was co-financed from the subsidy granted by the Voivodeship Fund for Environmental Protection and Water Management in Katowice. Implementation of the project costed PLN 2,8 million. Approximately 24% of the qualified cost (PLN 624 thousand) was covered with the grant from the Fund.

WIĘCEJ INFORMACJI

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