

Heat Pump Awards 2026

Application submission

10 Housing Co-operative Buildings

Panasonic | Large Heat Pump Award

1. Application overview

Submitted	2026-09-17
Award category	Large Heat Pump Award
Title of the project	10 housing co-operative buildings
Organisation Name	Panasonic
Exact address of the project	Spółdzielnia Mieszkaniowa "Odrodzenie", Kozuchów, Lubuskie
Funding	Private, EU funds
Organisations involved in the project	Tad-Dan; RM Proinvest Marek Rożnowski; Spółdzielnia Mieszkaniowa "Odrodzenie"
Project ending date	2026-09-01
Sector of application	Residential

2. Applicant & EHPA contact details

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EHPA member involved	Panasonic
Role of EHPA member	-

3. Project description and benefits

Project description (goal, problem addressed, and solution provided by the heat pump)

The goal was to reduce operating costs of multi-family residential buildings managed by the Odrodzenie Housing Cooperative. The investor commissioned an energy audit, technical design and cost simulations. The modernisation replaced district heating, increased energy independence and included heat pumps, photovoltaic systems, energy storage and a gas boiler. The contractor supervises the installation through a self-developed EMS system for management, monitoring, remote service and early warning.

Expected or achieved benefits

Noticeably lower utility bills compared with previous investments using Panasonic heat pumps managed by the cooperative.

Obstacles/barriers encountered during development

Convincing the investor was easier thanks to previous projects. Convincing residents, communities and housing cooperatives is often the greatest challenge.

Why should this project win an award?

This project demonstrates that modern heat pump technology can be successfully applied to existing multi-family residential buildings, significantly improving their energy independence while reducing operating costs. What makes it particularly compelling is the combination of high-capacity Panasonic heat pumps, photovoltaics, energy storage, a gas boiler and a custom EMS platform that intelligently manages all energy sources. The system can redirect surplus renewable energy to domestic hot water production and optimise operation based on the available energy, while also providing remote monitoring, servicing and early-warning diagnostics. Ten buildings are being modernised as part of one coordinated project, creating a scalable and repeatable model for other housing cooperatives looking to reduce energy costs and become less dependent on district heating.

4. Technical specifications

Capacity of unit(s)	BIG M 30 kW, BIG M 20 kW and T-CAP 16 kW
Energy sources used	Gas boiler, photovoltaics and energy storage systems
Coefficient of Performance (COP)	No info
Service provided	Heating and domestic hot water. Use of surplus energy for DHW heating, energy independence, efficient building energy management and lower DHW heating costs.
Refrigerant type	R290

Heat pump details (compressor technology, heat exchanger, system configuration)

Panasonic Big Aquarea T-CAP M Series, using R290 refrigerant and a Panasonic-developed compressor. The system is a single-stage air-to-water heat pump with an outdoor unit and separate control module. Heat is transferred to the water circuit via a plate heat exchanger. The 20 kW and 30 kW units are individual heat pump units; when multiple units are installed, they can be configured to operate in parallel to increase system capacity.

5. Renewable energy integration and grid response

Integration of renewable energy sources

No answer provided.

Response to energy demand / smart grid integration

A custom EMS platform redirects surplus generated energy so heat pumps operate mainly on photovoltaic and stored energy. The system enables monitoring, remote servicing, optimisation and early warning diagnostics.

6. Innovation and monitoring

General (all awards)

Why the project is innovative

Application of heat pumps in existing multi-family buildings and integration of advanced technologies to reduce real operating costs.

Monitoring approach (performance, cost, and carbon targets)

No answer provided.

For Innovation Award

Technology/technique developed solely for this project *(Innovation Award only)*

No answer provided.

Differentiation from state-of-the-art solutions & market maturity *(Innovation Award only)*

No answer provided.

Regional benefits (energy savings, emissions, jobs, infrastructure) *(Innovation Award only)*

No answer provided.

Commercial potential *(Innovation Award only)*

No answer provided.

For Large Heat Pump Award or Building Solutions Award

Why the project serves as a model for others *(Large Heat Pump or Building Solutions Awards)*

This project can serve as a model because it combines heat pumps, photovoltaics, energy storage and intelligent energy management in existing multi-family buildings. The solution reduces operating costs, increases energy independence and can be replicated in other housing cooperatives and similar buildings.

Potential for expansion to other locations/industries *(Large Heat Pump or Building Solutions Awards)*

Yes. It is scalable, repeatable and especially effective for domestic hot water applications.

Barriers to replication elsewhere *(Large Heat Pump or Building Solutions Awards)*

No answer provided.

7. Commercial potential

General (all awards)

Business opportunities for expansion, licensing, or commercial production *(both awards)*

No answer provided.