INVESTMENT FACTSHEET

(applicable for investments > 25.000 EUR total cost)

Project index number	CE0100345	**Acronym**	ZEB4ZEN
Investment number	I.2.1	**Investment title**	Solar Energy Community
Linked to pilot action (Output number - O.xx)	O.2.1	**Pilot action title**	Solar Energy Community (pilot action 1)
Responsible partner	PP4		
Investment finalisation date	25.09.2026		
Project website	https://www.interreg-central.eu/projects/zeb4zen		

Summary description of the investment

Please address the following topics.

Technical description of the investment (e.g. specific characteristics, technological concept, size, capacity, etc.)

(max. 5000 characters - depending on the investment size and related costs - if needed, please adjust the size of the textbox accordingly)

Two ground-mounted solar photovoltaic (PV) plants with a combined capacity of 108,4 kWp have been built in Palmanova, by reclaiming a degraded area and former landfill site located outside the historic city walls, thereby overcoming the constraints imposed by historic heritage protection regulations. The size of the plant was initially 40 kWp in the application form.

The renewable energy produced is virtually shared within a Renewable Energy Community (REC) comprising 27 active members, including public entities, families and SMEs, that collaborate to jointly produce, consume, and manage clean energy.

The establishment of the REC is a key element of the ZEB4ZEN Palmanova pilot and represents an innovative model for energy production and consumption enabling REC members residing in central Palmanova, an area under heritage and architectural constraints, to virtually exchange energy with a solar plants located outside the town walls.

Transnational relevance of the investment and how it contributed to the pilot action
(max. 1000 characters)

The investment has strong transnational relevance as it demonstrates a replicable approach to renewable energy production in historic urban areas where heritage protection constraints limit the installation of photovoltaic systems on buildings. The STELLA and SOLE plants, with a combined installed capacity of 108,4 kWp, provide the infrastructure underpinning the Renewable Energy Community (REC) established in Palmanova within the ZEB4ZEN project. Located on a former landfill outside the historic city walls, they enable renewable energy sharing with local consumers while preserving the architectural and cultural heritage of the UNESCO-listed city. The investment has therefore directly contributed to making the REC operational, offering transferable lessons for other European historic cities on combining renewable energy production, heritage conservation and community participation in the transition towards zero-emission neighbourhoods.

Ownership, durability and, if applicable, maintenance of the investment after the project end (see also programme manual chapters I.4.3.6 and III.5)
(max. 1000 characters)

The owner of the pilot site is the Municipality of Palmanova (PP4), a local public authority. PP4 has granted the Renewable Energy Community (REC)—established under the ZEB4ZEN project—the right to use the land free of charge for 30 years (via an Agreement signed on February 19th, 2026), which represents a reasonable duration for this technical solution.
In addition to being responsible for the investment, PP4 is an active member of the REC. The Community owns the PV plants and will take care of the equipment's maintenance after the project ends. Both PP4 and the REC administrators are fully aware of the Programme rules regarding durability.

Potential for scaling up or replicating the investment, contribution to the preparation and leverage of large-scale investments (if applicable)
(max. 1000 characters)

The ZEB4ZEN pilot in Palmanova provides concrete evidence of how the preservation of UNESCO historical and monumental heritage can be successfully combined with the pressing challenges of ecological transition and social cohesion. This initiative stands as an international best practice and a highly replicable model for historic local communities across Europe. Furthermore, since REC legislation in Italy is very recent, the project effectively addresses the lack of established experience in setting up energy communities by successfully overcoming bureaucratic hurdles and flexibly navigating an evolving national regulatory framework.
Regarding the scaling up of the project, the initiative has garnered significant interest from both local citizens and economic activities. This strong local engagement highlights high potential for growth, paving the way for the community to expand its membership and increase its overall energy capacity in the near future.

Environmental sustainability of the investment
Description of possible environmental effects of the investment. In particular for infrastructure investments with an expected lifespan > 5 years, possible impacts of climate change and planned mitigation measures for increasing climate resilience of the investment, if applicable (see also programme manual chapters I.3.3.3, I.4.4.5 and II.2.1.2)
(max. 1000 characters)

By promoting a renewable energy solution for the community of Palmanova, the investment contributes to climate neutrality and to the regeneration of the environment and ecosystem functions and services. Advancing towards near-zero energy neighbourhoods, the investment has a positive impact on climate change, reducing greenhouse gas emissions and achieving electricity neutrality.
The project takes into account the UN Sustainable Development Goals, targeting in particular Goal 7 Affordable and Clean Energy, Goal 11 Sustainable Cities and Communities, Goal 12 Responsible Consumption and Production and Goal 13 Climate Action.
In terms of factual data, using the methodology for monitoring, reporting and verification (MRV) of energy savings developed under WP2, the investments ensures final energy savings of 113.569,68 kWh/y, and CO_2 emissions savings of 29,53 t CO_2/y.

Fulfilment of regulatory obligations
(e.g. EU and national legislation and environmental policies, authorisations or permits by national/regional/local authorities etc.), if applicable
(max. 1000 characters)

The Palmanova pilot was implemented in compliance with the applicable EU and Italian regulatory framework for renewable energy communities and photovoltaic installations.
The REC was established as a recognised non-profit association, with legal personality granted by the Friuli Venezia Giulia Region.
The two photovoltaic plants, located on a former landfill designated for multifunctional photovoltaic parks under the municipal urban plan, were developed in accordance with Article 20 of Legislative Decree 199/2021. The required land-use agreements were formalised through municipal resolutions and concession contracts. The STELLA plant obtained authorisation through the Simplified Authorisation Procedure (PAS), while the SOLE plant was implemented under the free-building regime pursuant to Legislative Decree 190/2024. Both plants received grid-connection approval from e-distribuzione. This approach enables renewable energy production while respecting the heritage protection constraints of Palmanova's historic centre.

Fulfilment of programme branding requirements
(see chapter I.4.4.2 of the programme manual)
(max. 500 characters)

The investment and related communication materials were branded in accordance with the Interreg CENTRAL EUROPE Programme Manual. The project logo and required funding acknowledgement were used in the relevant materials. A durable plaque clearly visible to the public was displayed at the investment site in Palmanova.

Investment costs *Please include the total investment costs considering only costs for equipment (CC5) and infrastructure and works (CC6)*				79,172.59
Location of the investment	**NUTS 3**	ITH42	**Address**	via Miurina 1 33057 Palmanova (UD)
GPS coordinates, if available		Plant 1 "Stella": Lat: 45.9050486703877 Long: 13.332824692864998 Plant 2 "Sole": Lat: 45.90483337337004 Long: 13.332548783627965"▫		
Annex(es), if applicable (e.g. pictures) - *please specify the type of annex(es), pdf file to be separately uploaded in Jems*				pictures of the pv plants and Programme branding requirements in: I.2.1_Annexes.pdf