



Installation of solar heat panels in multi-apartment buildings



Summary

Energy efficiency improvements in apartment buildings can be complemented by installing local RES technologies. The decision to do this has to be made by the formally established community of apartment owners of the particular building. ERDF financed the complex financial instrument provided by the Latvian state-owned development finance institution ALTUM. When using this instrument, most apartment buildings only implemented energy efficiency improvements. Only a few apartment buildings took advantage of the additional option to install zero-emission solar heat panels. One such case is 18 Riga Street in the town of Valmiera, Latvia.

Why is it a case of energy citizenship?

The case (1) is an example of prosumerism in a district heating network, (2) shows that apartment owners can cooperate to create shared energy-related benefits due to energy savings, and (3) highlights how a few communities of apartment owners have been able to go further than making “classical, traditional” energy efficiency improvements to a building.



DIRECT ENERGY PRODUCTION / CONSUMPTION



URBAN



COLLECTIVE



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101022492.



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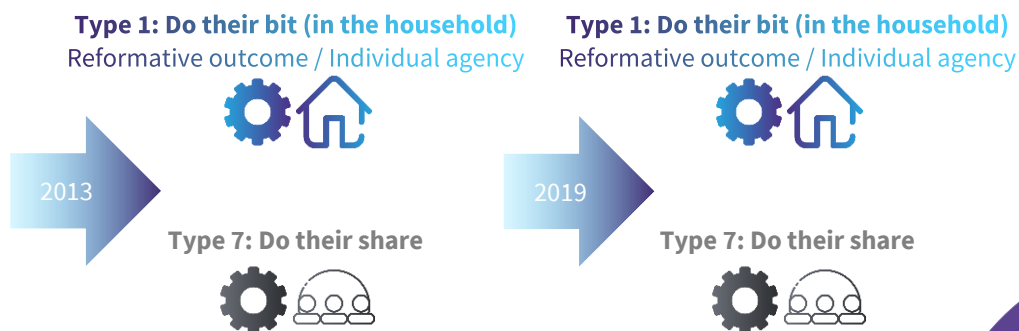
Goals

1. Making energy savings and thus generating economic benefits for the owners of a Soviet-era multi-apartment building which had never been deeply renovated and was slowly degrading inside and outside.
2. Increasing the self-production of heat energy and local community ownership of a decentralised energy system. The inhabitants wanted to support energy self-production and self-sufficiency to counter energy poverty.
3. Promoting climate action – by reducing CO2 emissions.

The story and the typology

The project design and documents for preparing for installing solar heat panels in multi-apartment buildings started in 2013. This work was mainly done in partnership with the municipal property management company *Valmieras Namsaimnieks* (Valmiera Housing Management), which is a serving also for inhabitants of multi-apartment buildings, having contract with house, and then also choosing their services for related project design and management. The same company was later the main intermediary for all the processes associated with the building renovation stages, including management for European ERDF co-funding and remaining co-funding via contracting for inhabitants' loan from bank.

There were no fundamental changes until 2018 either related to outcome orientation (reformative/transformative goals) or the aims/objectives of the case. This is obvious considering that the case only concerns an initiative created by the community of apartment owners of a single multi-apartment building.



Case history summary

For the summary methodology, click [HERE!](#)



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Phase 1: Setting up the case and installing the panels, 2013 - 2018

The first initiative was taken by two individuals (house inhabitants) who were elected by the community of apartment owners to their House Council and expressed their views about the unfavourable situation with the interior and exterior status of the shared dwelling. Joint discussions followed in the Council, led by those two initiators, particularly Nauris Kalniņš (chairman of the Council) and other flat owners. Finally, after several meetings, the community of apartment owners decided to go ahead with the project. This included insulating the external walls, foundations, basement and attic slabs; replacement of windows, doors and roofing; electrical installation in the basement, attic and stairwell; improvement of the ventilation system; reconstruction of the water supply and heating system, installation of lightning protection and repair of the stairwell. One speciality is that a solar heat collector system was also installed to provide hot water for the house.




The project proposal was dormant following 2013 as this particular multi-apartment building did not

Phase 2: In operation, present and future, 2019 -

After the refurbishment and the solar collector system were installed, the second phase started with energy savings and functioning. The building was submitted to the 2020 Latvian national competition “Latvia Energy efficient building” in the category “Energy efficient renovated multi-apartment building” and received the ALTUM affection award “For innovation”.

correspond to some of the general rules defined by the Cabinet of Ministers of the Republic of Latvia, specifically established for ERDF funding provisions. Only after those rules were amended did this building become eligible, too.

Following this, the project proposal was activated, and the related work was carried out in the second half of 2018 after all co-founding resources were successfully secured from the EU, from the bank loan for the building's residents and from the financial support from the municipality (through a grant system from the Valmiera city municipality).



	Individual			Collective	
					
 Reformative	1. Do their bit (in the household)	3. Do their bit (within organizations)	5. Make their voice heard	7. Do their share	9. Do the job
 Transformative	2. Do their own (in the household)	4. Do it their way (within organizations)	6. Make their vote count	8. Go ahead	10. Make their claims

Main type: Do their bit (in the household)

Reformative outcome / Private in the household agency

Secondary type: Do their share

Reformative outcome / Citizen-based and hybrid agency

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Reformative outcome / Citizen-based and hybrid agency

The aspects of energy citizenship

The case shows how apartment owners in a shared building were able to decide on joint action that creates shared energy benefits due to energy savings and were able to go further than making the “traditional” energy efficiency improvements associated with buildings by complementing them with the installation of rooftop solar heating panels.

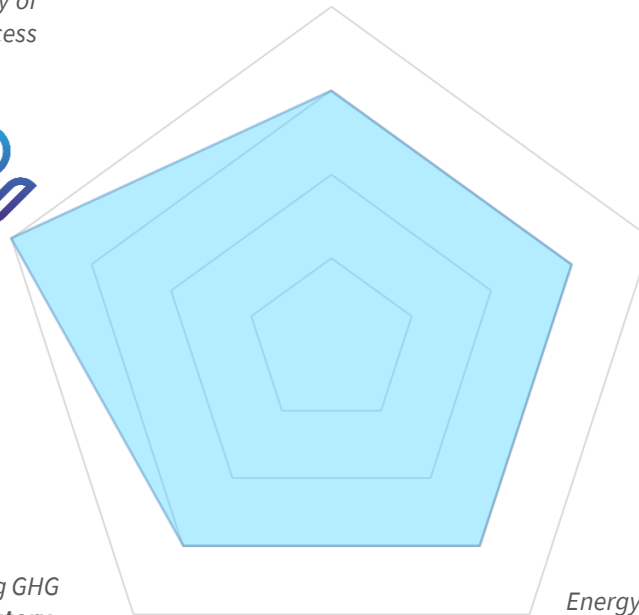


Decision-making by the community of apartment owners of building was consensual as majority decision-making occurred.
The decision to renovate the building was made by the community of apartment owners through the democratic decision-making process prescribed by the relevant legislation.



Democratic energy future
Energy democracy is considered a positive value, but it remains limited to formal energy democracy

Citizen power/control
Citizens exert effective control, and their votes have to be taken into account



The case is limited to multi-apartment building-scale activity. At the same time, equal access is granted to all citizens potentially concerned – the owners of apartments.



Equity and justice
Equal access is granted, but limited by various criteria

The national co-funding requirement is to work towards reducing GHG emissions, thus the **goal of reducing CO₂ is mandatory**. Beneficiaries/the building inhabitants must evaluate CO₂ reductions during the project execution.

Carbon limit
Explicit recognition of the carbon limit



Energy and energy efficiency remain the focus. There is a good combination of energy efficiency improvements and energy self-production; however, environmental sustainability cannot be considered the core issue.



Environmental sustainability
Environmental sustainability is part of the process; energy remains the main focus



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Further information



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Source of images

<https://www.v-nami.lv>



Case study authors

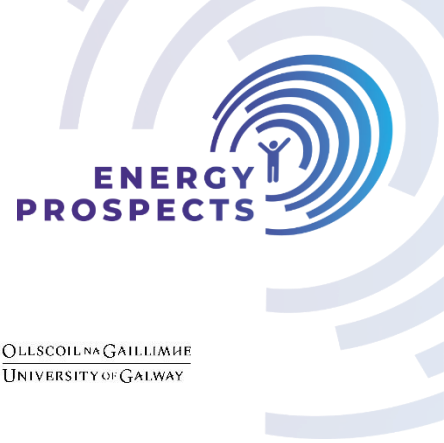
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