



Towards energy communities in Preiļi municipality

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Fields of expertise



Dr. sc. ing. Ieva Pakere

- PhD in Environmental Engineering and Energy
- Associate professor at Riga Technical University
- Author of more than 50 scientific publications related to *district heating, renewable energy, smart energy systems...*
- Certified energy auditor, energy efficiency expert
- Experience in cooperation with Municipalities, Ministries and Companies
- Resident of Preiļi Municipality



Preiļi Municipality



NUMBER OF INHABITANTS

16 660



TOTAL AREA

1413,13 km²



NUMBER OF ENTERPRISES

1038 enterprises
from them 540 agricultural



Energy and climate ambitions

Sustainable Energy and Climate Action Plan 2030 (SECAP) of Preiļi Municipality

- Approved in June 2022
- The set goals are in line with the Preiļi Municipality Development Program 2022-2029
- Developed in cooperation with Ltd. Ekodoma

Vision:

Reach carbon-neutral Preiļi Municipality in 2050



Preiļu novada
ilgtspējīgas enerģētikas
un klimata rīcības plāns
līdz 2030. gadam



SECAP targets for 2030

Reduce energy consumption in municipal infrastructure

- More than 6000 MWh of annual energy savings

To achieve maximum efficiency in district heat supply and to increase renewable electricity production

- More than 11 000 MWh produced RES electricity per year
- 764 tones reduced CO₂ emissions

Ensure that households can afford the necessary energy resources for a comfortable life

- More than 200 thousand EUR savings

Climate-resistant Preiļi Municipality

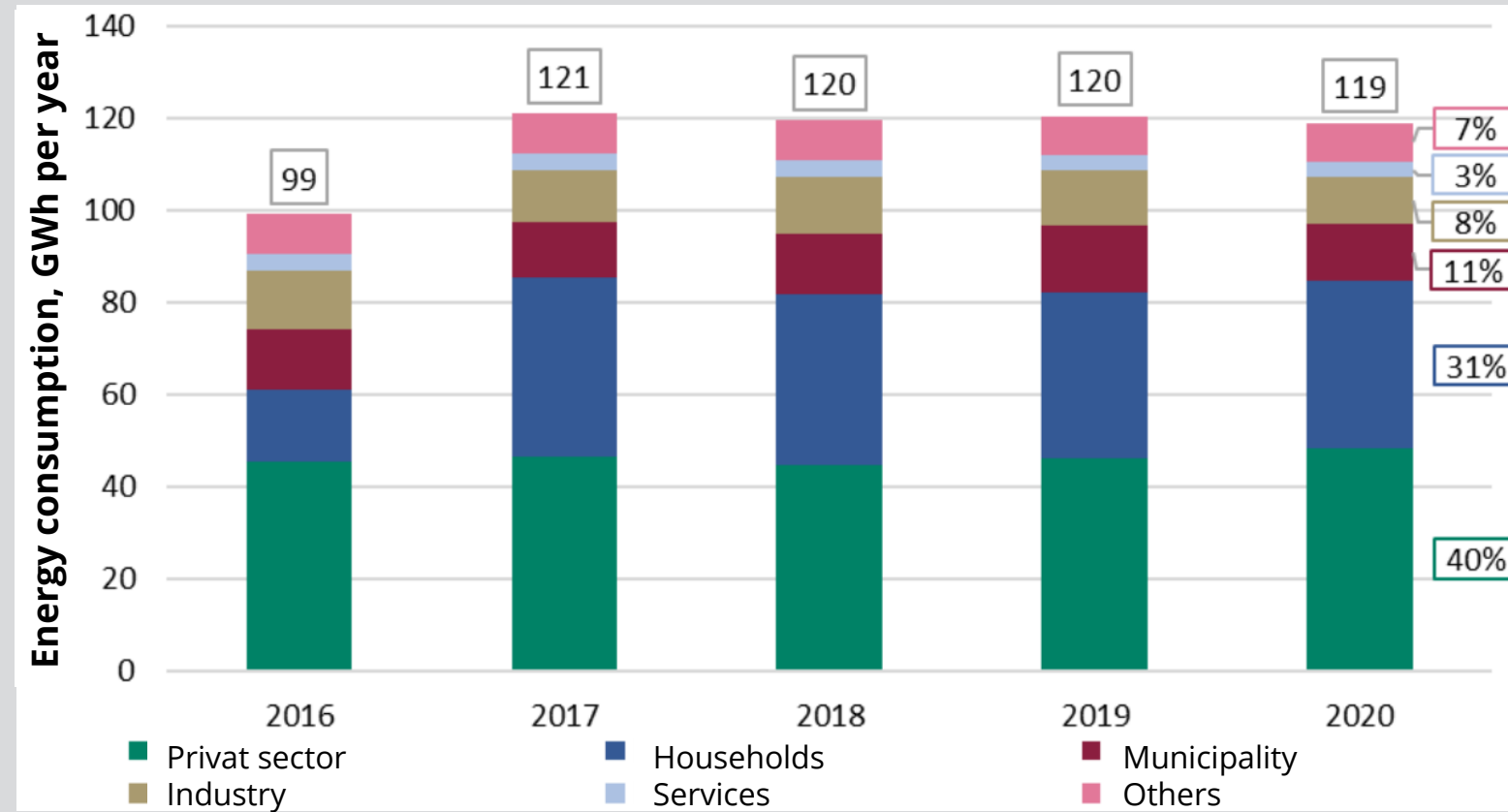
- Improved infrastructure

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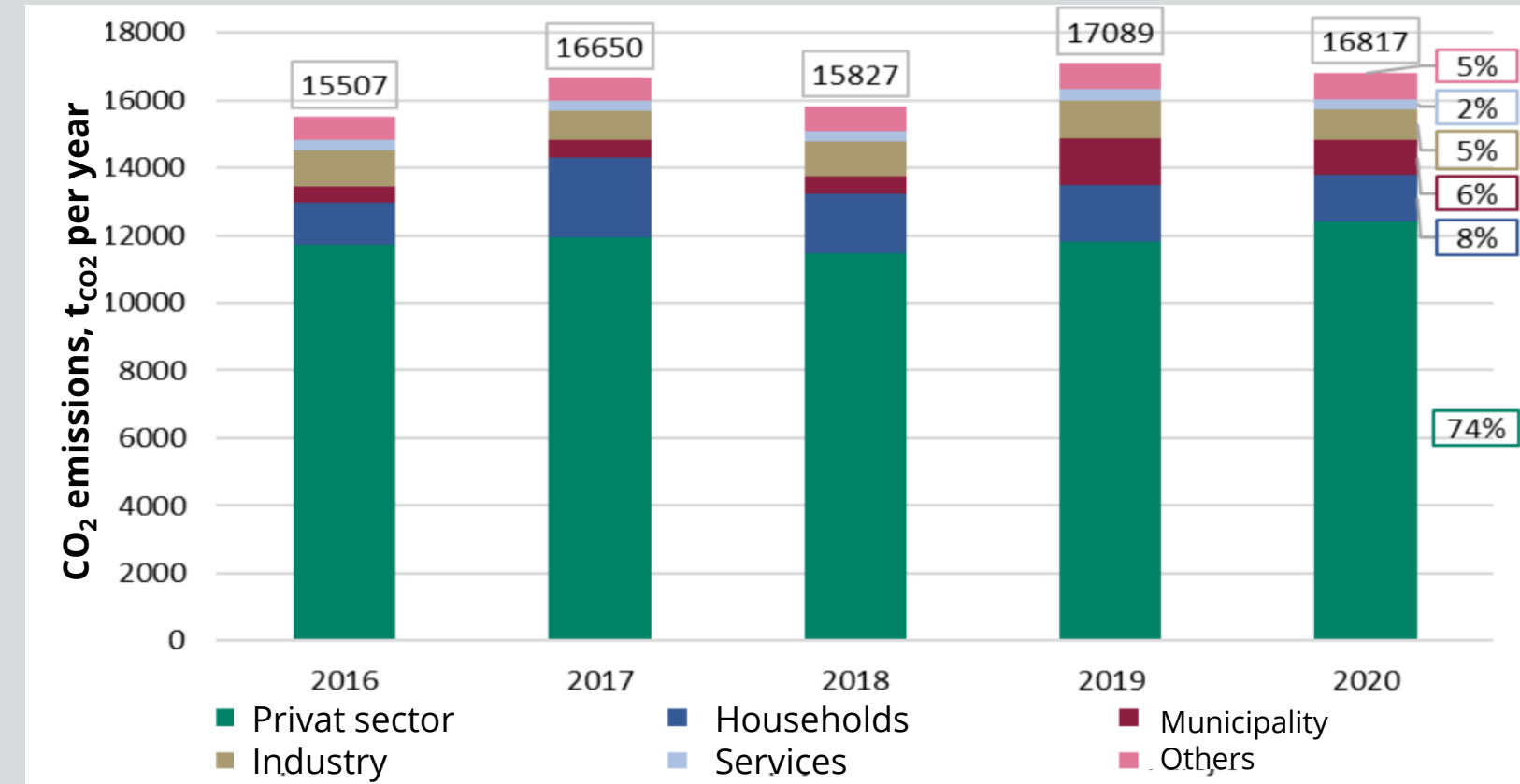


Baseline in Preiži Municipality

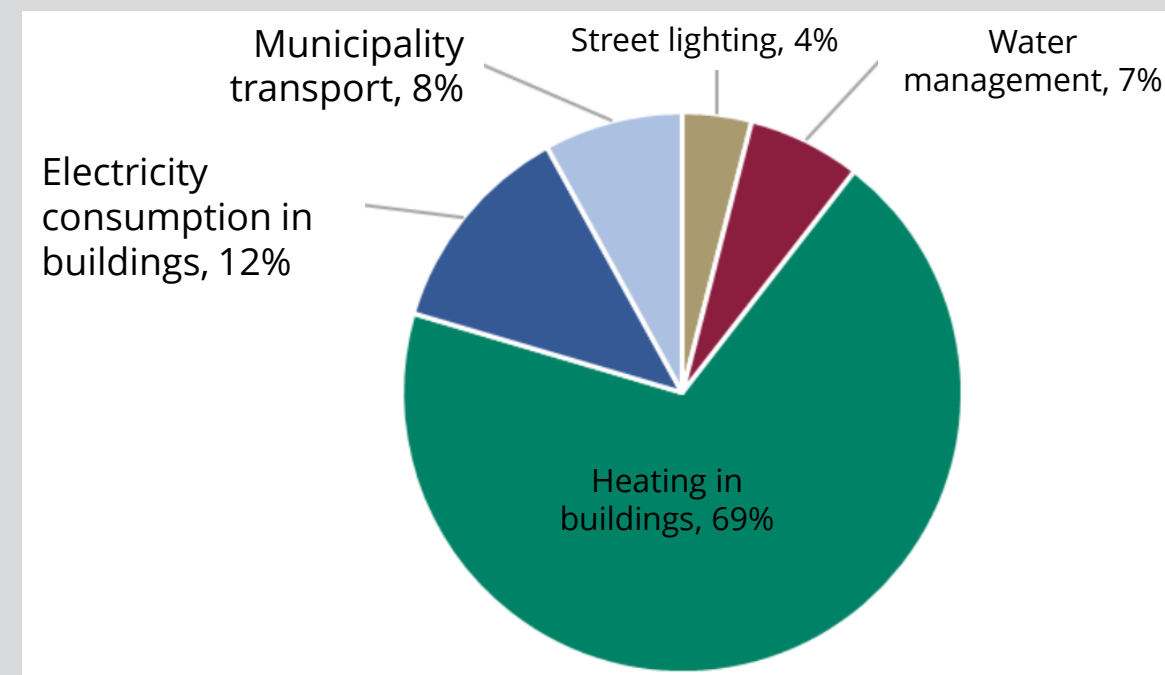
Energy consumption



CO₂ emissions



Main energy consumers in Municipality



Towards energy communities

Energy
efficiency

Renewable
energy
integration

Energy
Communities





Energy efficiency in buildings

Best practice examples



Renovation of sport school

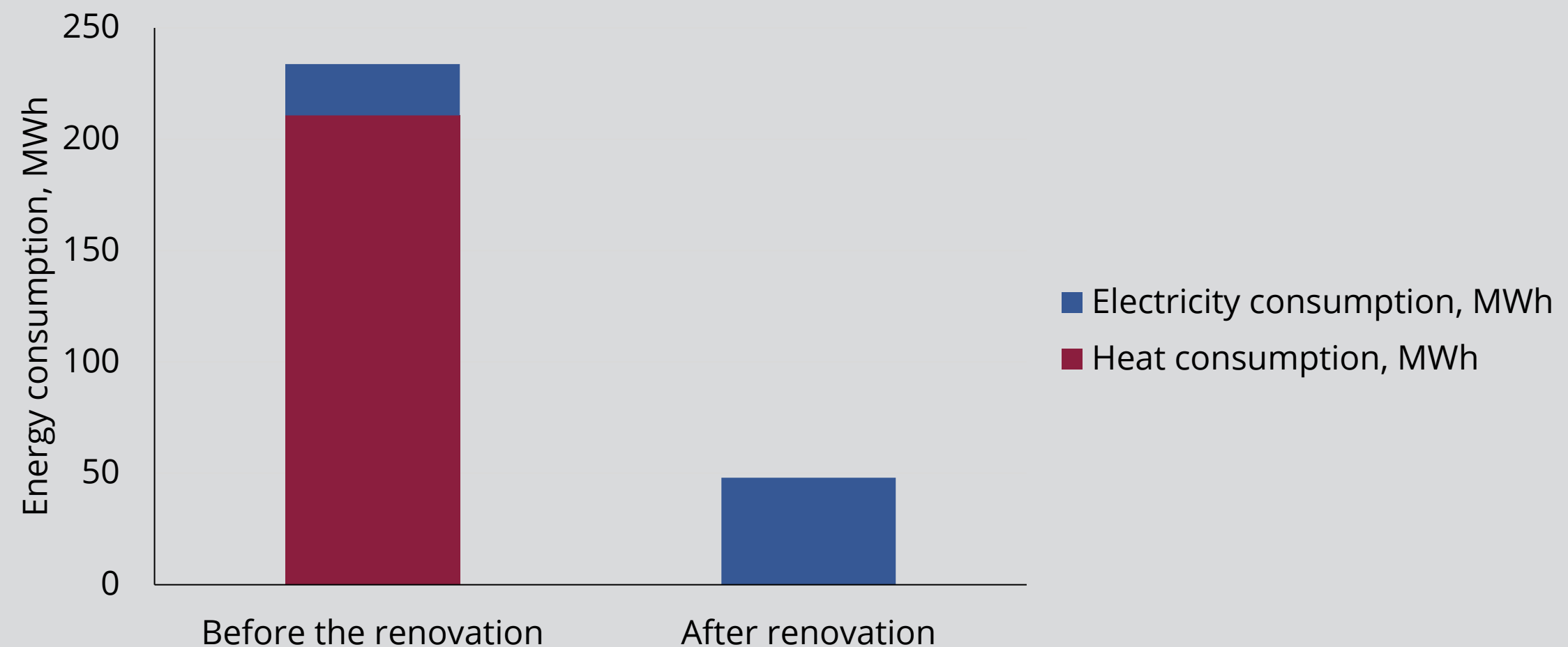
- Building with sports halls;
- A total area of 1920 m²;
- Built in 1985.
- One of the most serious problems was insufficient supply of heat;
- Renovation was done from June 2021 to September 9, 2022;
- Total renovations costs 1.66 million EUR, 40% co-funded by ERDF;
- 2nd place in the nomination "Most Energy-Efficient Public Building in Latvia 2023"



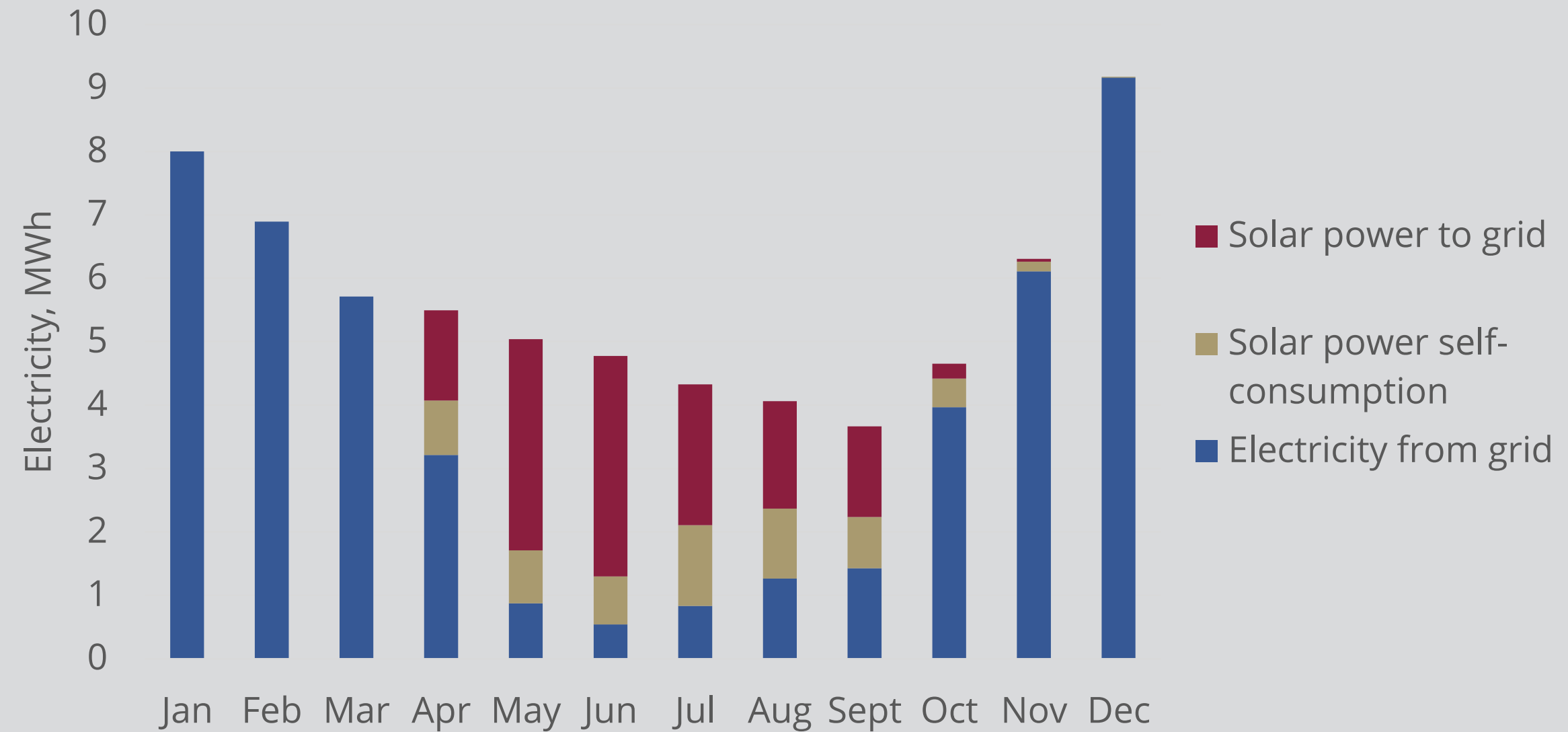
Achieved energy savings

Main renovation activities:

- insulation of the building's external walls, roof and floor;
- renovation of the internal heating system,
- creation of a ventilation system,
- installation of solar batteries – 25 kW capacity
- installation of ground source and air source heat pumps- 93 + 30 kW capacity



Solar energy production

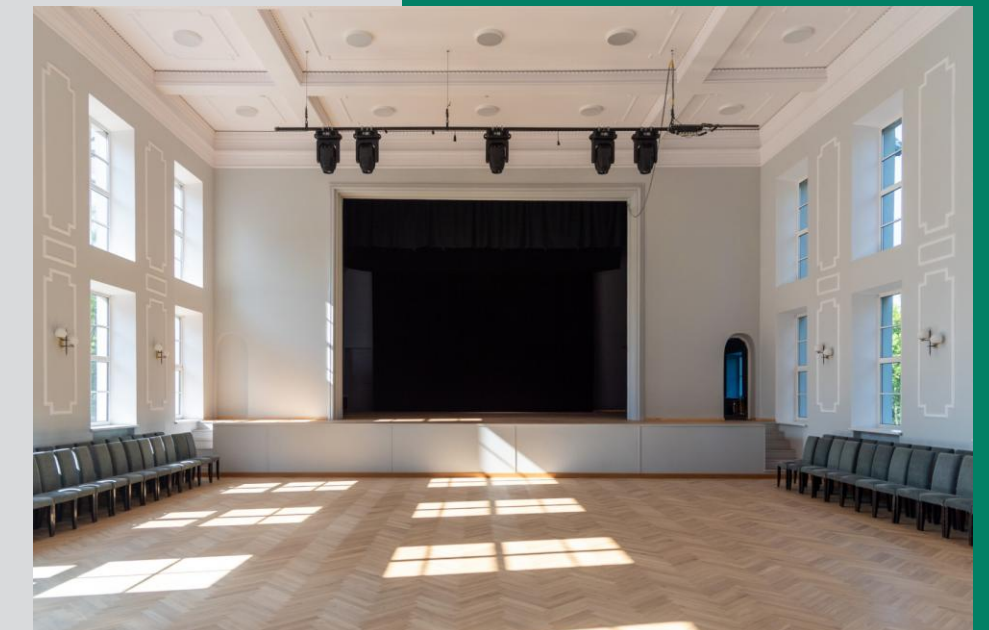


Total CO₂ savings: **74 tones CO₂ per year**



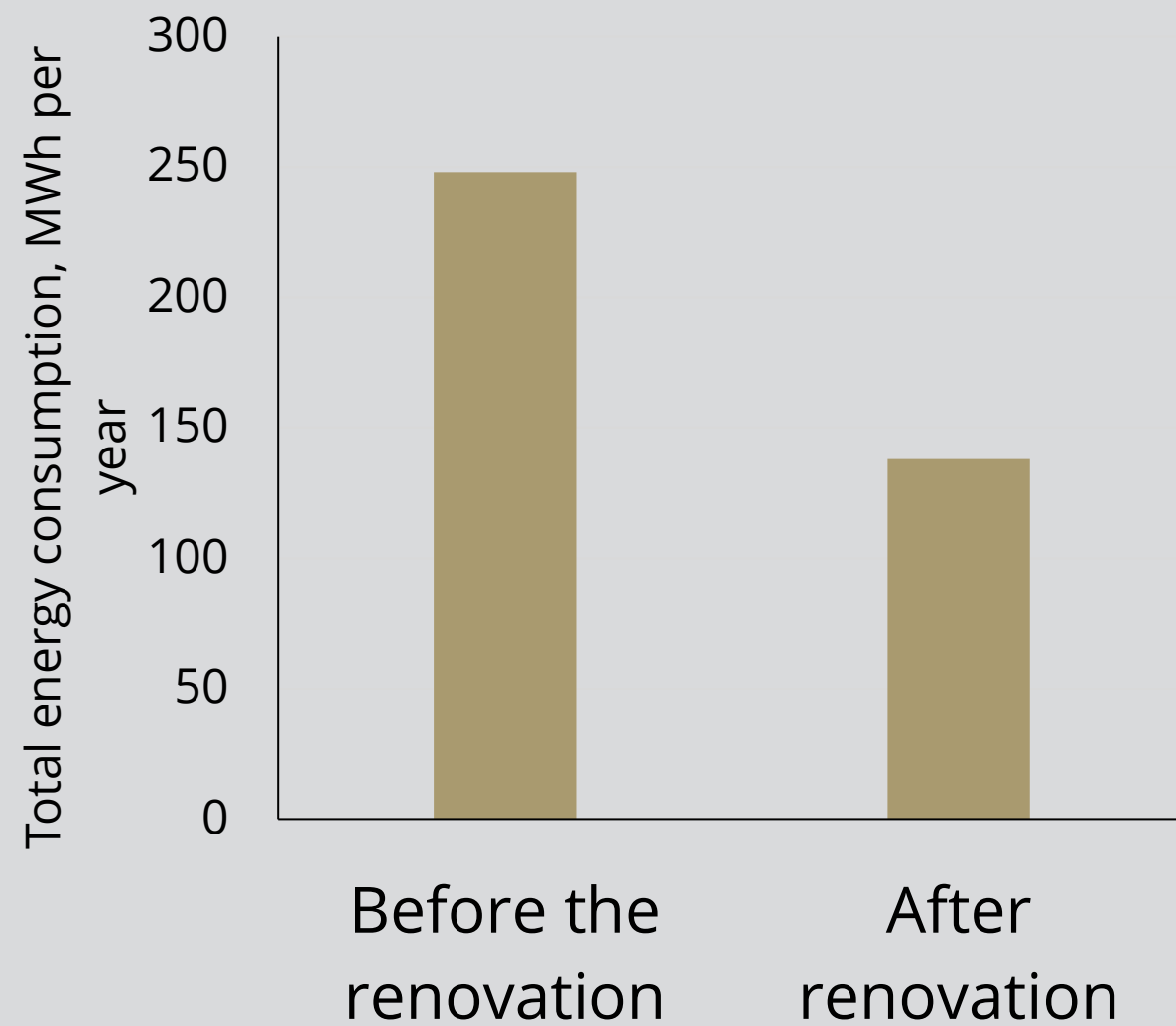
Renovation of Culture center

- Building for cultural events;
- A total area of 1558 m²;
- Built in 1956.
- Renovation was done from spring 2022 to summer 2023;
- Total renovations costs 1.66 million EUR, 40% co-funded by ERDF;
- Main renovation activities:
 - insulation of the building's walls, roof and floor;
 - renovation of a ventilation system,
 - change of internal lighting
 - installation of solar batteries – 20 kW capacity

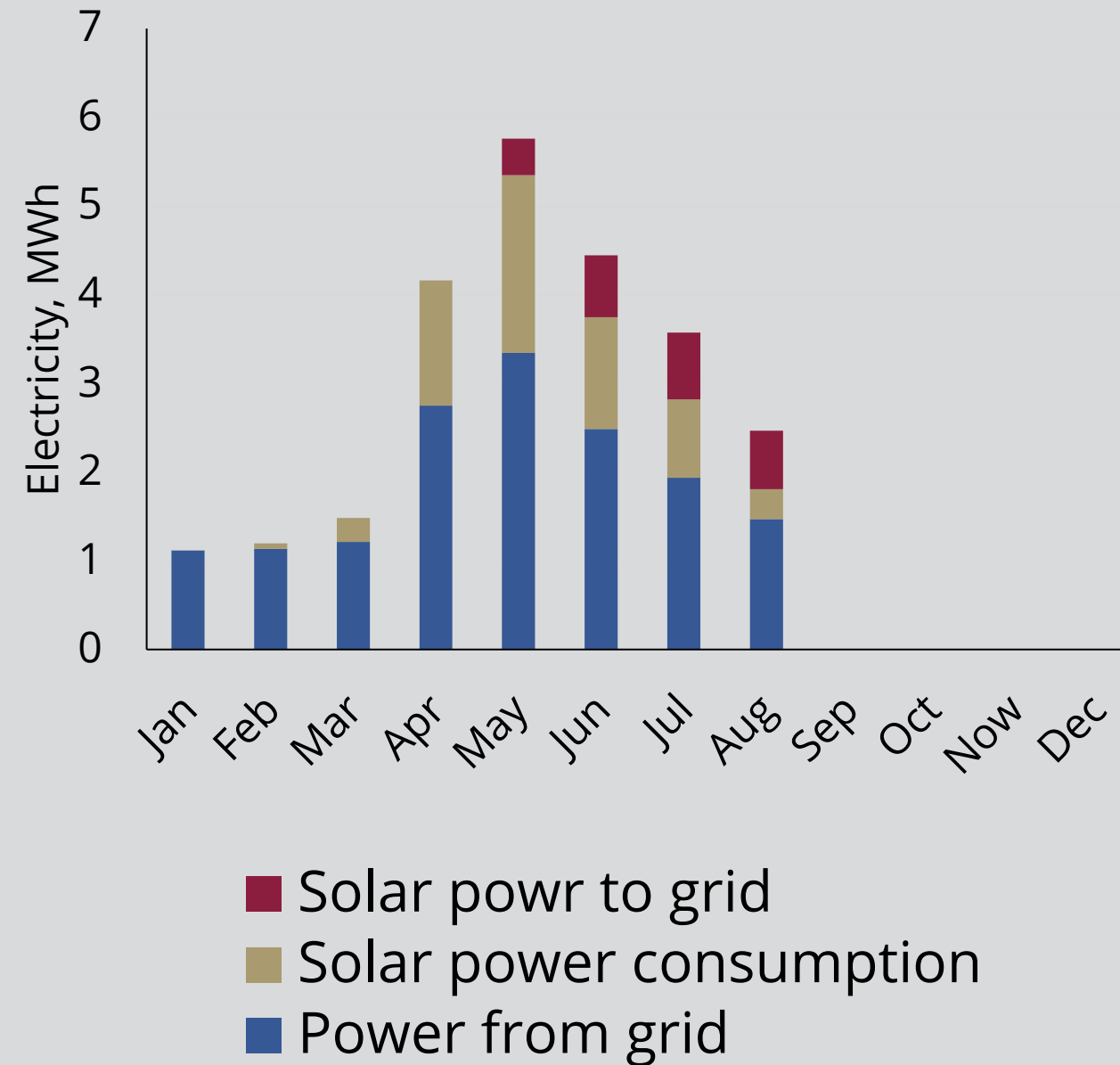


Achieved energy savings

Total energy savings*



Solar energy production



Total CO₂ savings*: **9.5 tones CO₂ per year**

*Planned



Transport electrification



Use of electric cars

Total car park

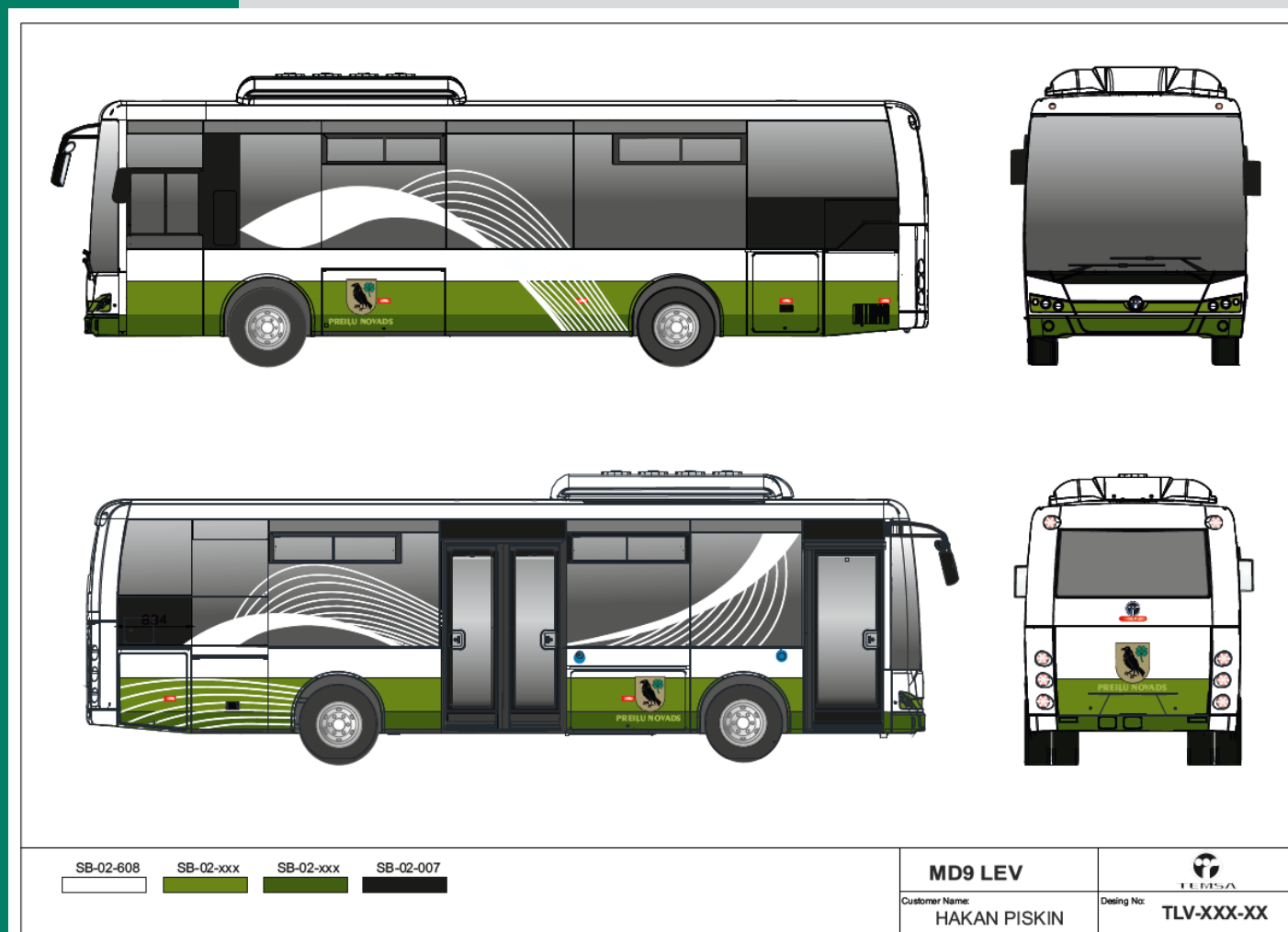
- 37 passenger cars;
- 18 buses

Electric cars

- 2 passenger cars;
- 1 buss (2 planned)

Charging infrastructure

- Two 11 kW charging stations;
- 80 kW charging station (2 planned);



Installation of RES in industry



RES in the largest industrial site

- Ltd. «Preiļu siers» - one of largest milk processing plants in Latvia located in Preiļi city;
- Produces around 10,000 tones of cheese every year;
- Since 2015 uses mainly wood chips for heat production;
- In 2021 **solar PV plant project** realised:
 - Located on the roof of a wood chip warehouse;
 - Installed **capacity of 155 kW**;
 - All produced solar electricity is **used in the plant** for milk processing
 - Total CO₂ savings: **16 tones CO₂ per year**



Upcoming large-scale RES projects



Preiļi Municipality – place for large-scale wind park?



ENERGY PĪKULI WIND PARK

Up to 24 wind turbines

477 GWh of generated electricity

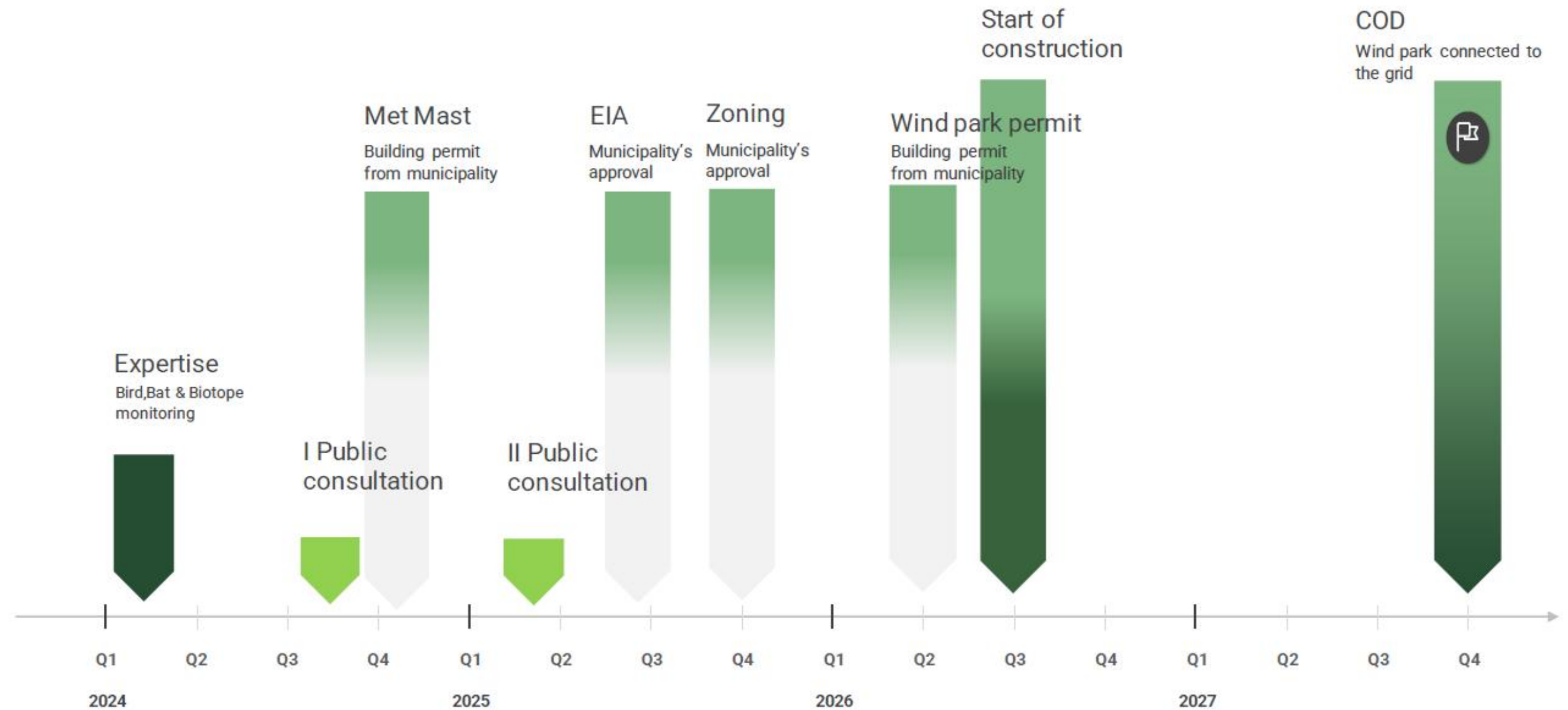
190,000 households provided

223 million € investment

The image shows an aerial view of a wind farm with several white wind turbines scattered across a green, rolling landscape. The sky is blue with scattered white clouds. Below the image, there are four icons: two wind turbines, a lightning bolt inside a circle, a house with a tree, and a circular arrow. Each icon is accompanied by a text label describing the project's specifications.

Development stage

ENERGY PRĪKUĻI WIND PARK DEVELOPMENT



Conclusions

- Currently, there are no energy communities in Preiși Municipality.
- The municipality is steadily improving energy efficiency in buildings and infrastructure.
- Solar PV panels are being installed on more buildings.
- Excess solar electricity is fed into the grid but could be utilized for future energy communities.
- Expanding the integration of solar stations with electric vehicle charging offers growth potential.
- Collaboration with large-scale wind project developers could bring benefits to local residents

