

COPPER

Case Study

How the **City of Ghent** is piloting **energy planning** for one of Europe's first all-electric neighbourhoods

*With funding from the European Union through the COPPER initiative, the **City of Ghent** is partnering with **DSO Fluvius** to pilot state-of-the-art energy planning and flexibility incentives for one of Europe's first 'all-electric neighbourhoods' in Mariakerke.*



CHALLENGE

Ghent aims to be a leader in Europe for the green transition. As well as doubling the number of PVs by 2050 and rolling out a sustainable district heating network, Ghent aims to reduce household energy consumption by 30% by 2030 and achieve climate neutrality by 2050.

To lay the foundations for neutrality, **Ghent is piloting an 'all-electric' residential area in the municipality of Mariakerke.** To make the shift to carbon-neutral heating and electric vehicles possible, Ghent must invest in a resilient electricity grid, ensuring that the needs of ambitious electrification plans can be met.



APPROACH

Working closely with local DSO Fluvius, Ghent will pilot Mariakerke as an all-electric neighbourhood. Testing the and researching the infrastructure, stakeholders and investment required to realise an all-electric neighbourhood.

Alongside this rollout, the city will work with the University of Ghent to run optimisation studies to determine the best possible energy management strategy to be replicated across Gent.



20 MW

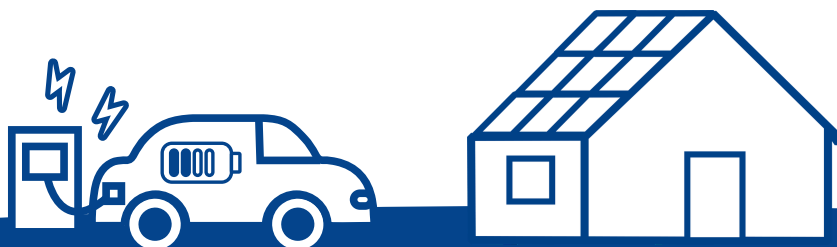
Current household consumption in Mariakerke

5,962

Households in the all-electric zone

10%

Estimated solar panel penetration



OBJECTIVES



Develop a future-proof energy management strategy

Together with the University of Ghent, the DSO Fluvius and the inhabitants of Mariakerke Ghent will research the different flexibility options for a futureproof stable electric grid.



Create a Local Energy Action Plan for an all-electric neighbourhood

While monitoring the electric consumption of the inhabitants of Mariakerke, combined with the simulations of the University Ghent, Ghent will create a local energy action plan to inform their future coordination of all-electric residential areas.



Model a successful DSO-city alliance

Local DSO Fluvius are partnering on this project, helping both city and DSO to determine how local energy action planning responsibilities will be shared between different local energy stakeholders



“Creating an all-electric future is a massive objective. It’s essential we prepare the different stakeholders for this transition. By planning en researching this future for one neighborhood, Ghent, Fluvius, it’s inhabitants and the electric grid will be ready to take on this task.”



Bram Roelant

Project Lead for COPPER, City of Ghent

Learn more by contacting contact@coppercities.eu