

# DEMO 4 – BELGIUM

Carnot battery and seasonal thermal storage



DEMO LEADER:  
UNIVERSITE  
DE LIEGE



Martelange  
Belgium



Domain  
Electricity, Heat



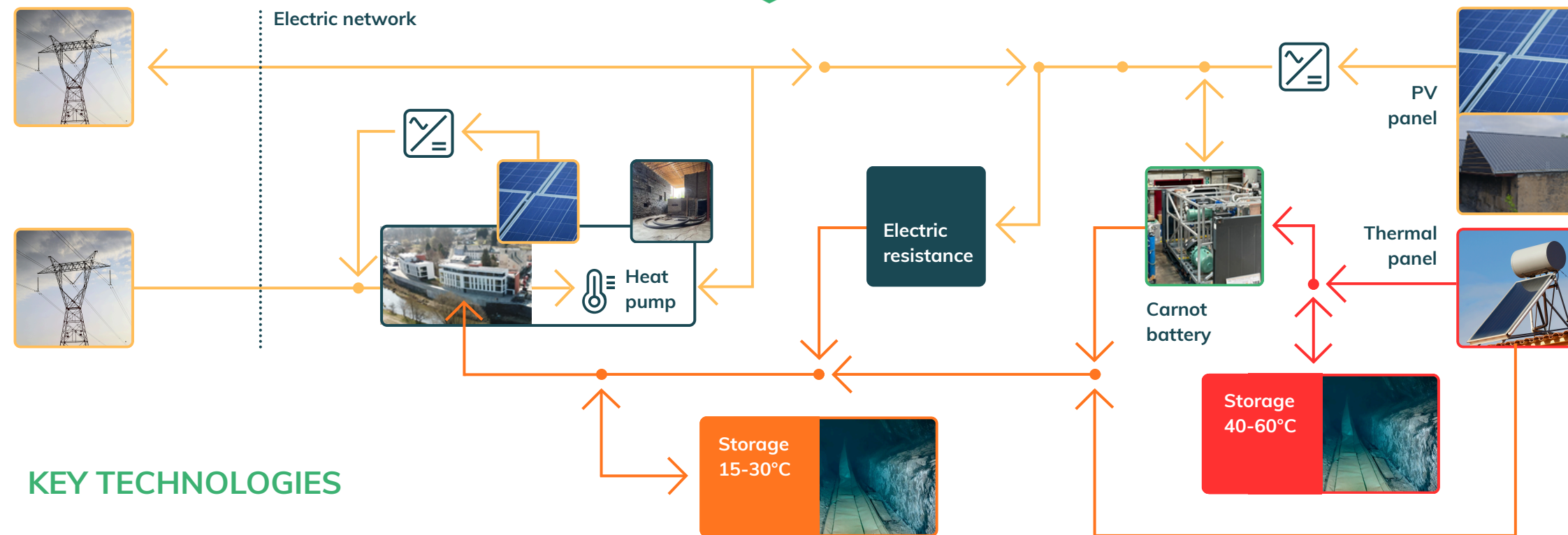
Partners involved  
Wingest  
University of Liège  
Flexide Energy

*“The Martelange demo tests a Carnot battery and seasonal thermal storage, reducing reliance on fossil energy while providing flexibility services to the local grid.”*



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KEY TECHNOLOGIES



TECHNICAL CHARACTERISTICS



Carnot Battery

- 50 kW electrical power
- 500 kW thermal power



Underground Storage

- 6,500 m<sup>3</sup> water
- Temperature range: 30–50°C



Buildings

- 60 high-efficiency residential buildings
- Designed to scale up to 200 buildings

IMPACT

- Cost-effective long-term thermal energy storage
- Reduced fossil fuel dependency
- Increased grid stability
- Renewable energy absorbed when available, used when needed