

# E.ON ectogrid™

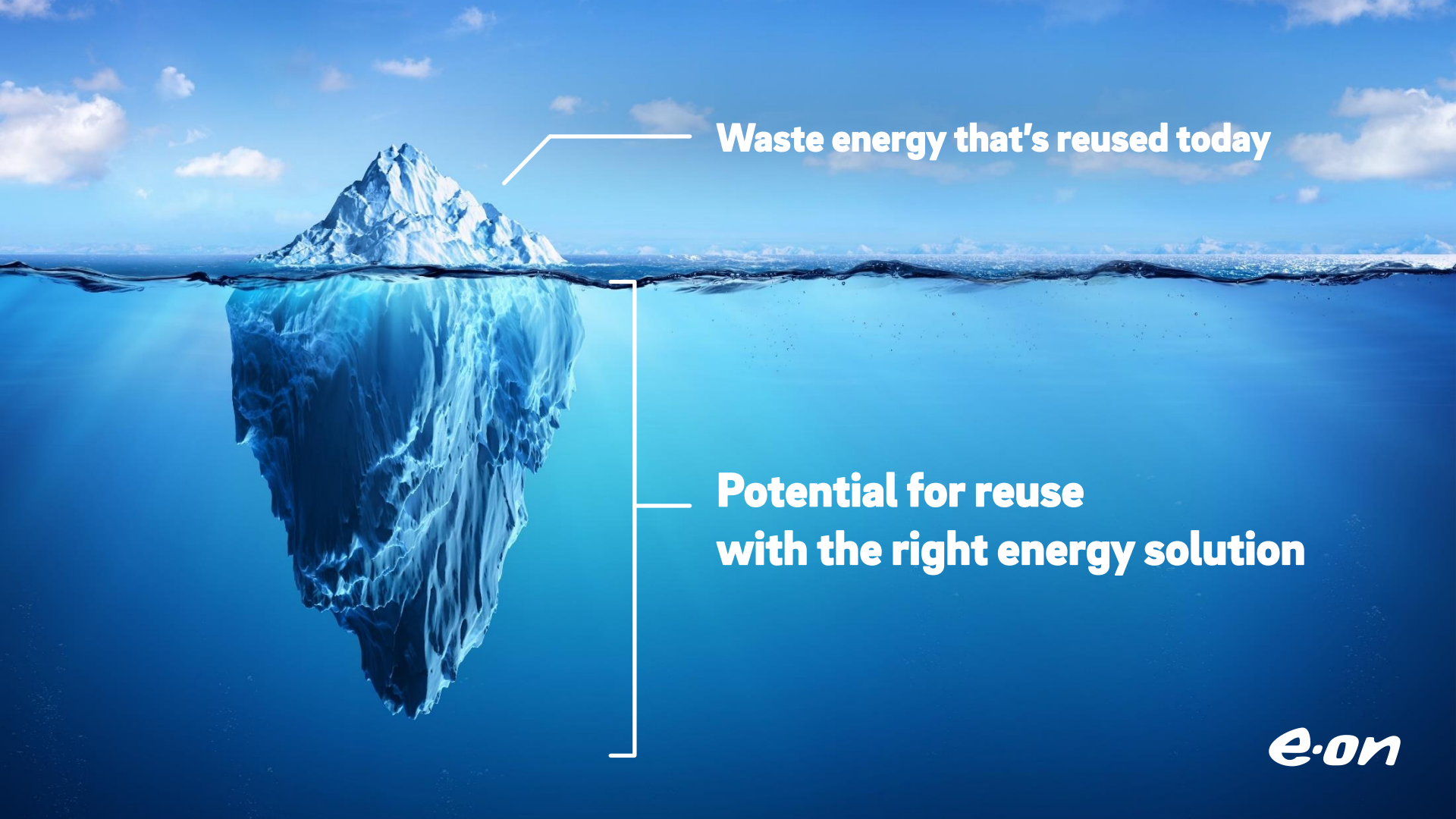
A revolutionary energy solution for heating and cooling

23.10.2023

**e.on**

# Challenges

- ✓ Urbanization and electrification are driving the development of the new energy landscape
- ✓ Sustainability and energy efficiency are issues of growing importance
- ✓ Energy costs are rising
- ✓ Today's energy systems produce a high volume of waste heat

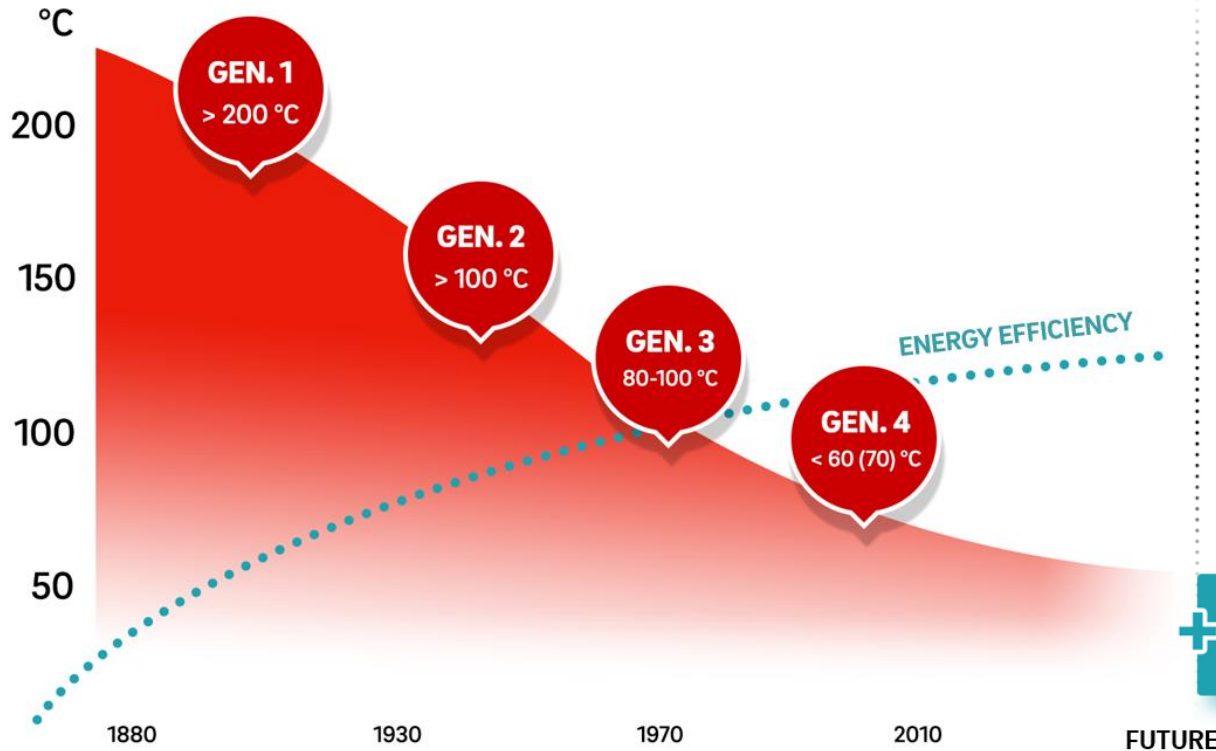


**Waste energy that's reused today**

**Potential for reuse  
with the right energy solution**

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# District Heating means constant evolution



- ✓ Warm
- ✓ Flexible
- ✓ Cold

Low and flexible system temperatures

+ 5GDH™

# Intelligent control

## Digital platform – controls and optimizes E.ON ectogrid™:



Adjusts temperature to improve COP-value for heat pumps and chillers



Minimizes peak demand, costs and environmental impact



Maximizes the use of self-produced renewable electricity



Manages prioritizing of energy sources



Monitor the solution and send alerts when deviations from plan



Built in Microsoft's secure Cloud platform

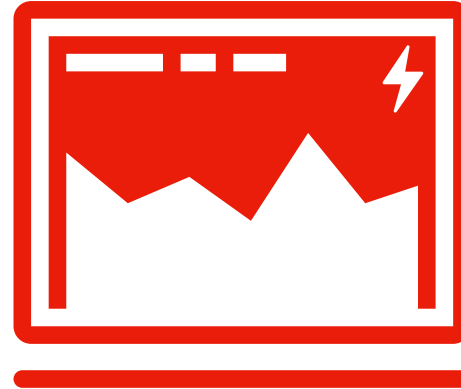
# Intelligent control

## Prognostics and real-time capabilities

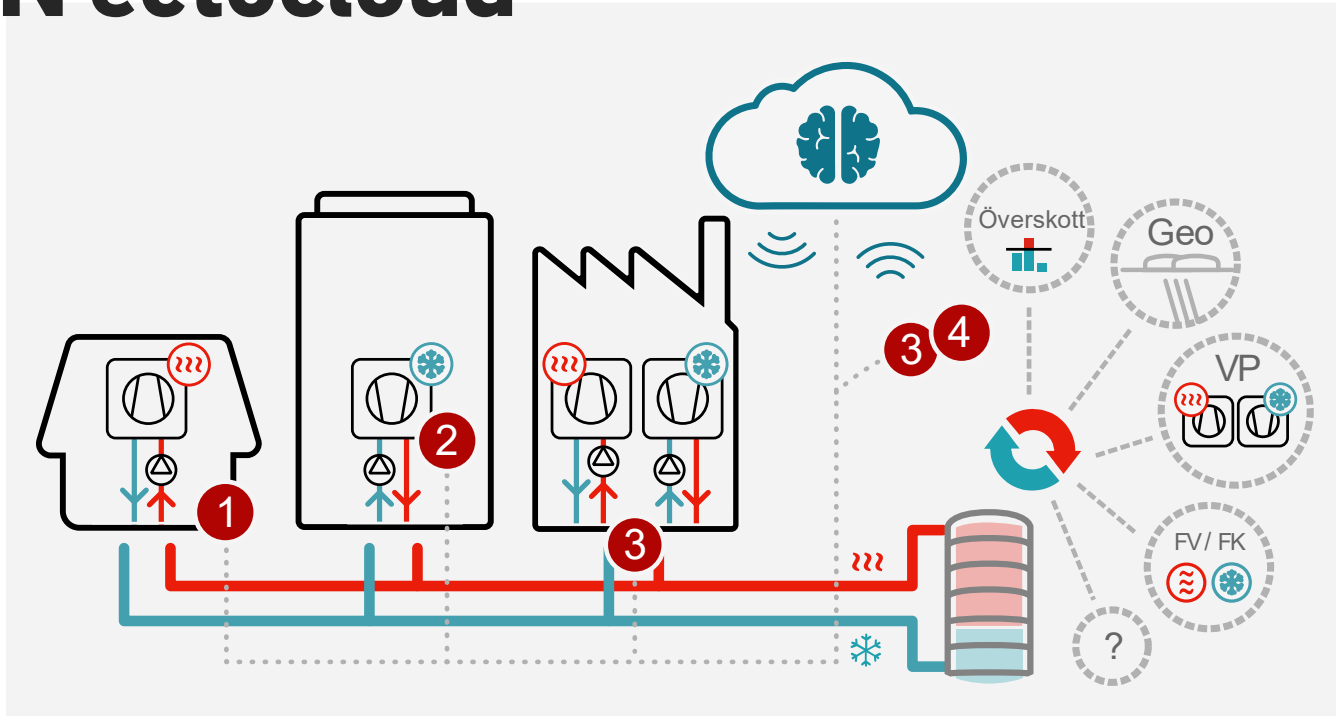
E.ON ectocloud™ makes data-driven prognoses for energy consumption based on weather, energy prices, local energy production and flexibility. The software can even adjust in real time as needed.

## Powerful operator interface

The E.ON ectocloud™ interface is the control room for the operator. It can show current status for the whole system as well as monitor individual plants in customizable dashboards. The interface also features an alarm management function to quickly identify issues.



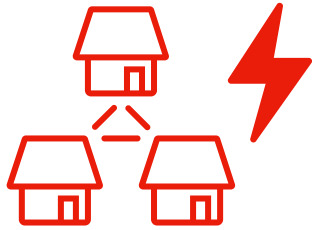
# E.ON ectocloud™



1. Demand Side Management | 2. Control of heat pump/chiller power output | 3. Control of return temperature to the network |
4. Start/stop and prioritizing of active balancing unit (i.e., geo-energy, heat pump, chiller, district cooling, district heating)

# E.ON ectocloud™

## Extra features



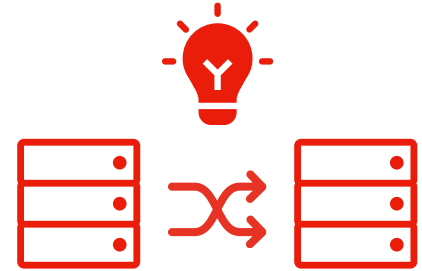
### **Design energy solutions,**

Plan, dimension and simulate  
new energy infrastructure



### **Powerful analysis**

At the system level right down  
to individual plants



### **Smart APIs**

Take advantage of E.ON  
ectogrid™ data in other  
platforms



# Why choose E.ON ectogrid?



## 2-in-1-system

A complete energy system for heating and cooling



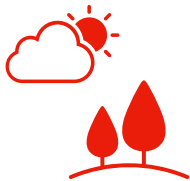
## Minimize supplied energy

Always use all available energy in the system through balancing and sharing



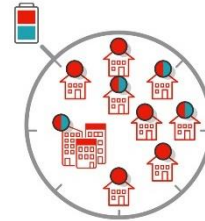
## Reduce energy costs

Limiting the amount of supplied energy means more competitive prices



## Minimize climate impact

Enabling greater use of intermittent renewable energy can result in a zero-emission solution.



## Cost effective and scalable

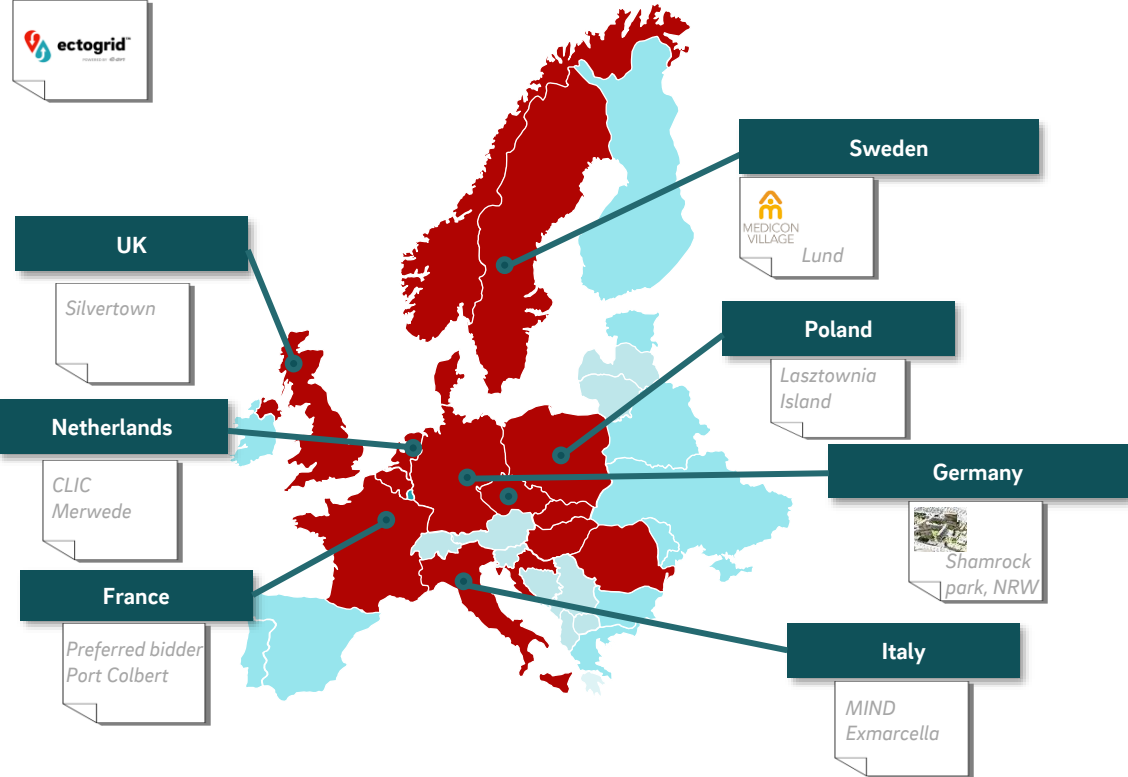
The lack of expensive special components means a decentralized system that you can scale up to cover more buildings or even a whole neighborhood.



# E.ON's patented technology for carbon neutral low temperature grids

## Customer projects under development in seven different markets

Selected references detailed out in the appendix



An E.ON Innovation – 50 patents pending



# CASE: Medicon Village



**15**

commercial and residential  
buildings

**170**

Life Science companies,  
2 600 people

**14 GWh**

heating and cooling – before  
E.ON ectogrid™

**65 %**

expected decrease of  
added energy using E.ON  
ectogrid™

" E.ON ectogrid™ is an energy solution that goes very well with our goal and vision – a sustainable and inventive research park for science and innovation."

**Erik Jagesten**  
CEO Medicon Village

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**Thank you!**

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