



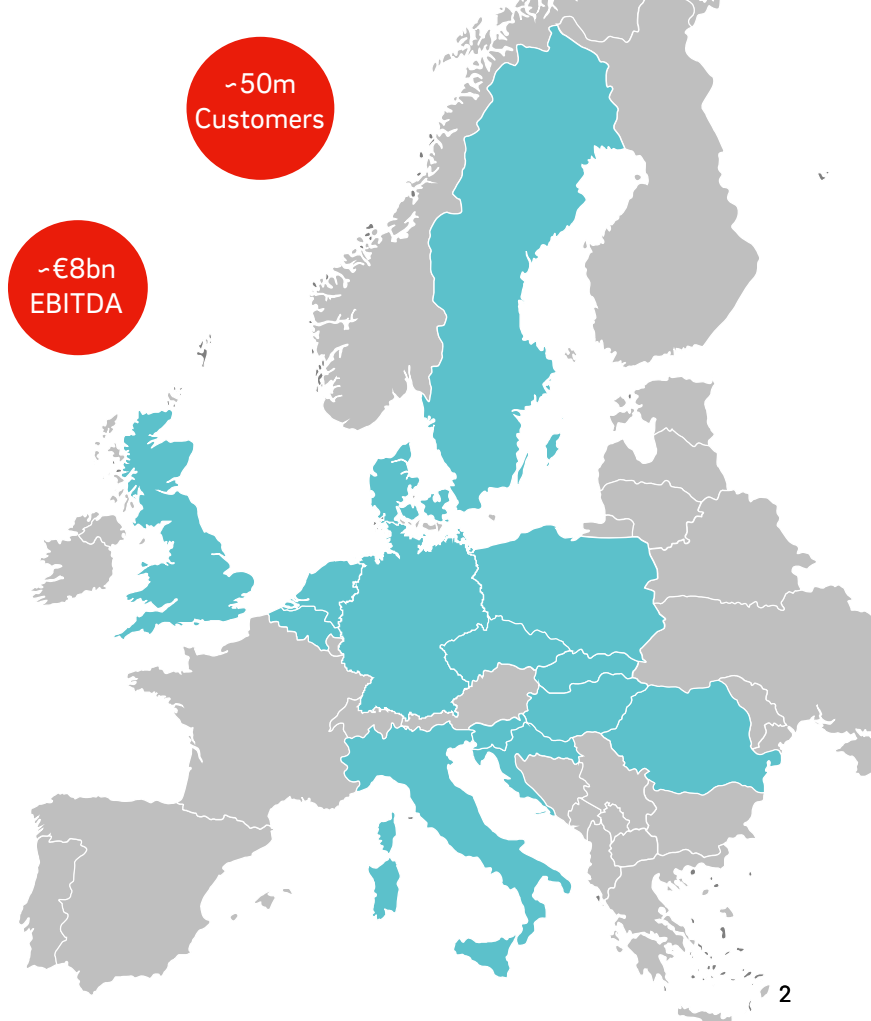
ectogrid™ – the heating and cooling solution for a clean energy future

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E.ON

E.ON Becoming the Forerunner of the Decentralized Energy World

On going merger with Innogy will accelerate the development of E.ON

- Focus on intelligent networks and innovative customer solutions
- Customers will be able to rely on better and more competitive offers
- E.ON will do its utmost to ensure that Europe can successfully combine its competitive strength with a sustainable energy policy

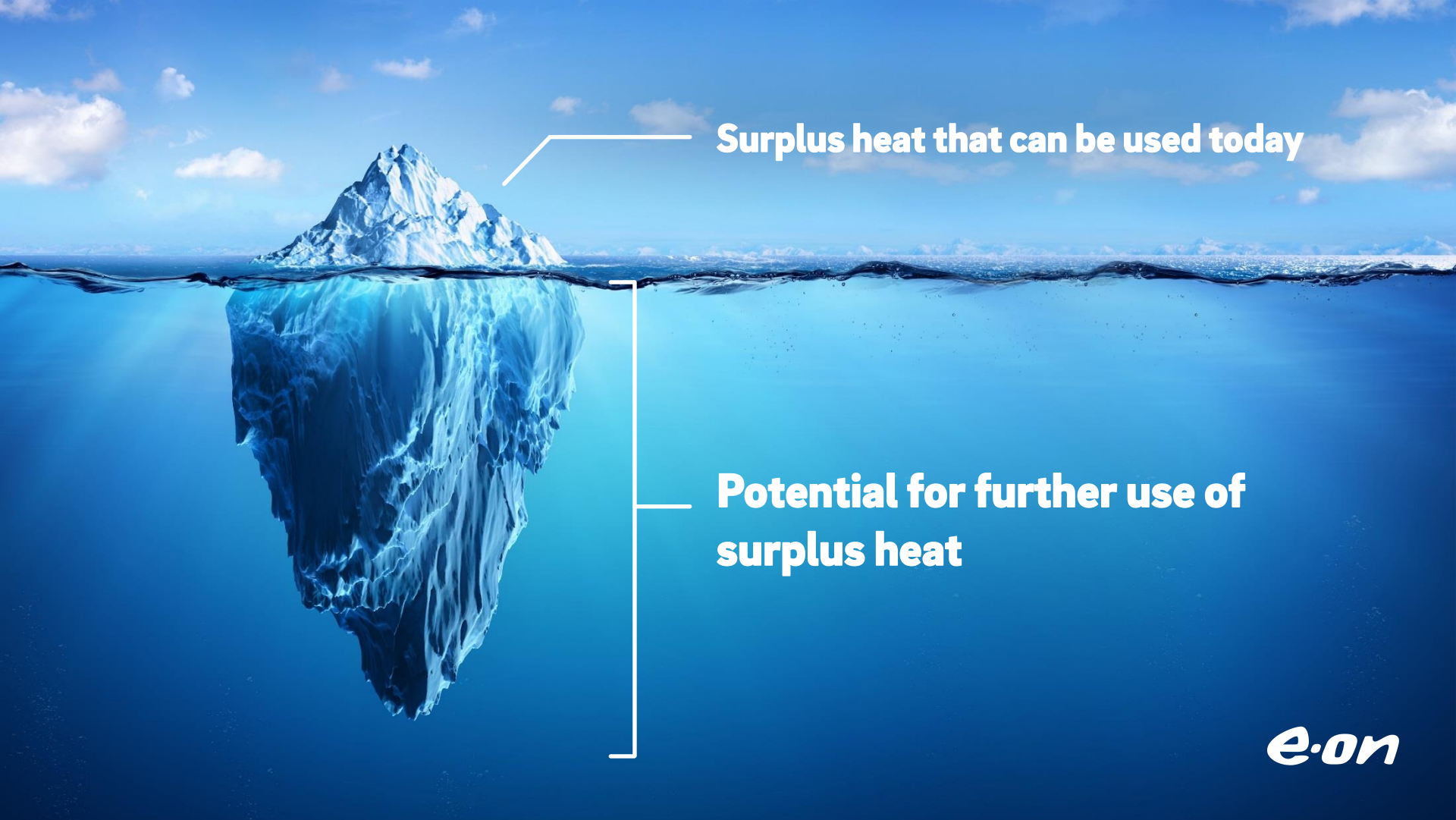


The New Energy Landscape

Urbanization and sustainability are drivers in shaping the new decentral energy landscape.

A satellite image of Europe at night, showing the continent's outline and the dense network of city lights. The image is set against the dark blue background of the Earth's atmosphere and the blackness of space. The curve of the Earth is visible on the left side.

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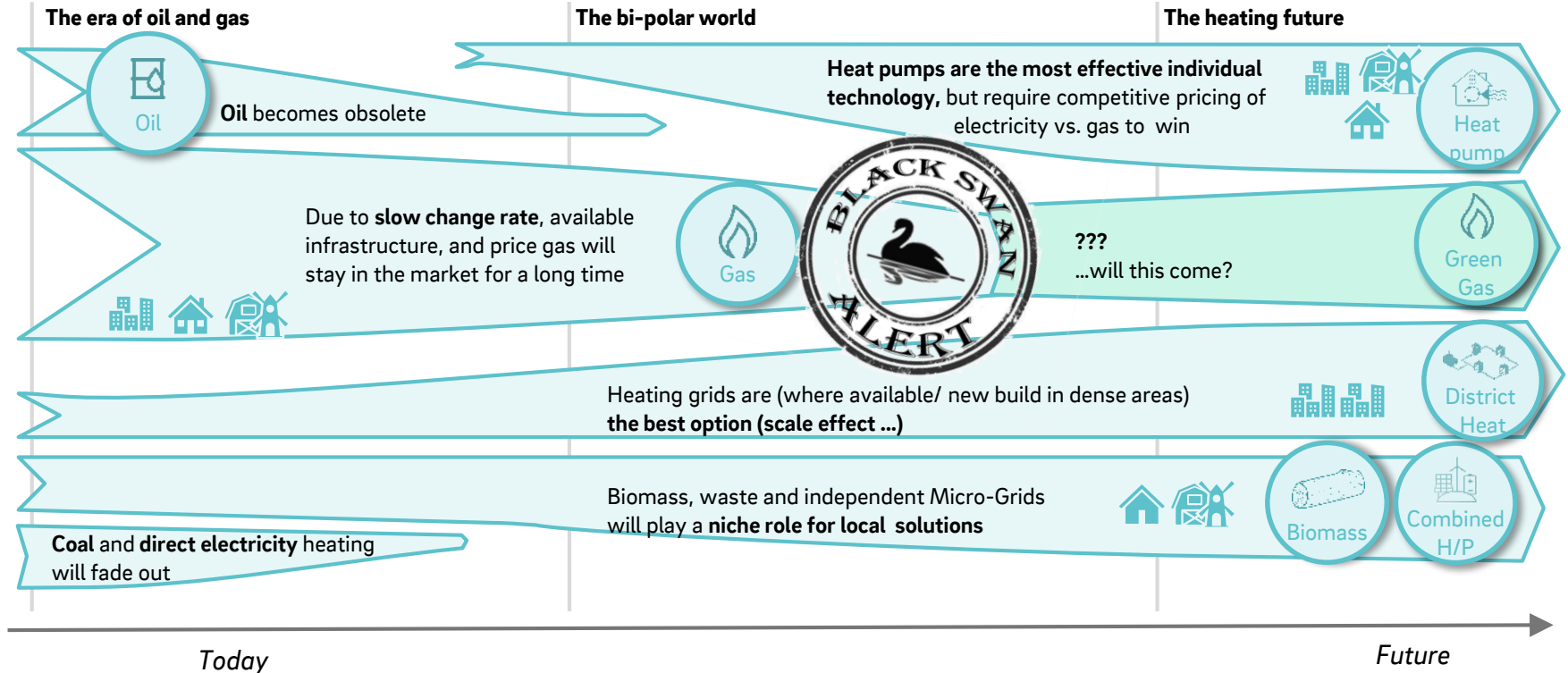


Surplus heat that can be used today

**Potential for further use of
surplus heat**

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Heat pumps will play an important role in the changing heating market



Local balancing of heating and cooling – ectogrid™

Infrared spectrum



Visual spectrum



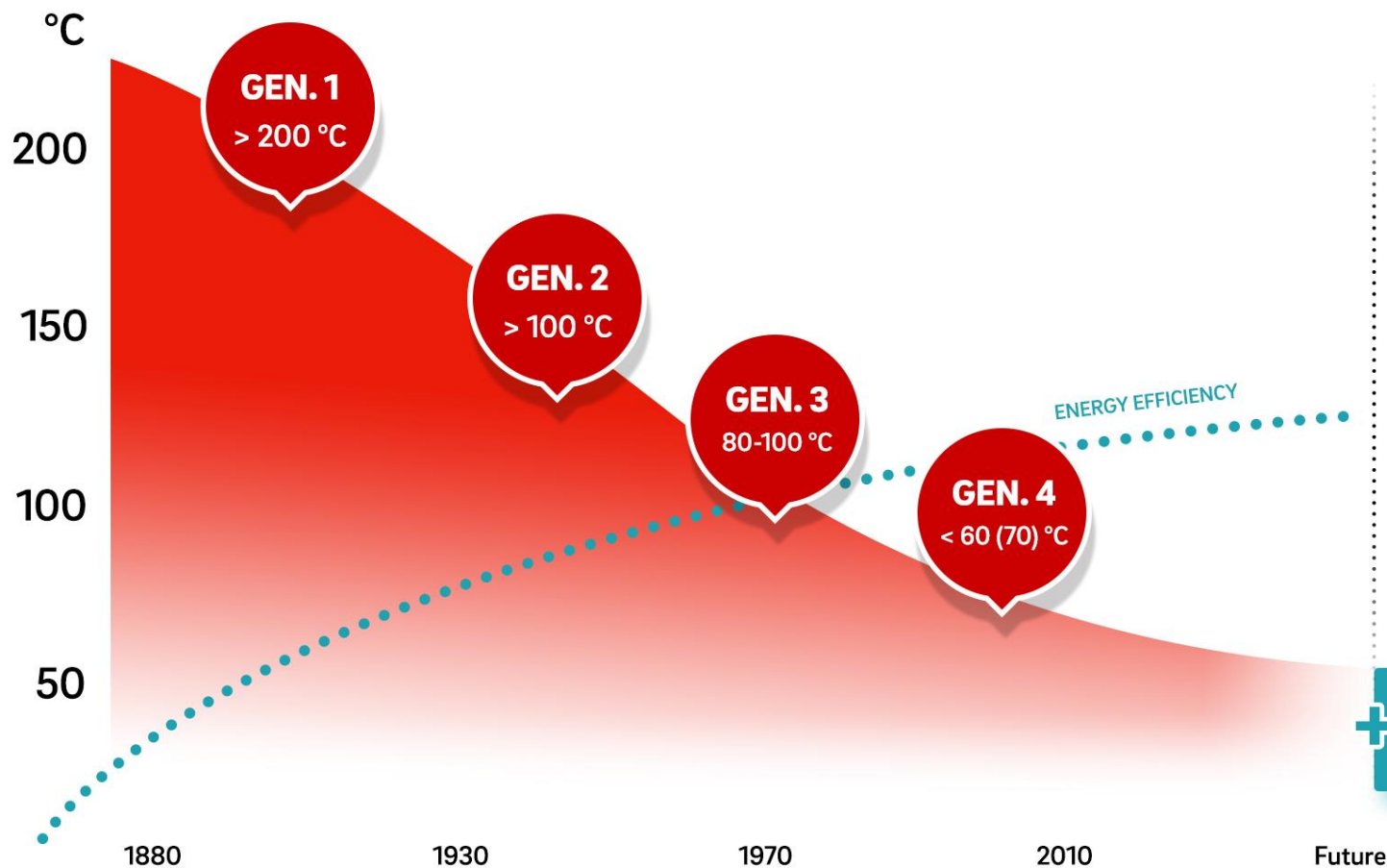
Imagery over Malmö, Sweden. Captured by unmanned drone after a night with no clouds.

Conventional cooling



Infrared spectrum

Visual spectrum



- ✓ Warm
- ✓ Flexible
- ✓ Cold

**Low and flexible
system temperatures**

+ 5GDH™

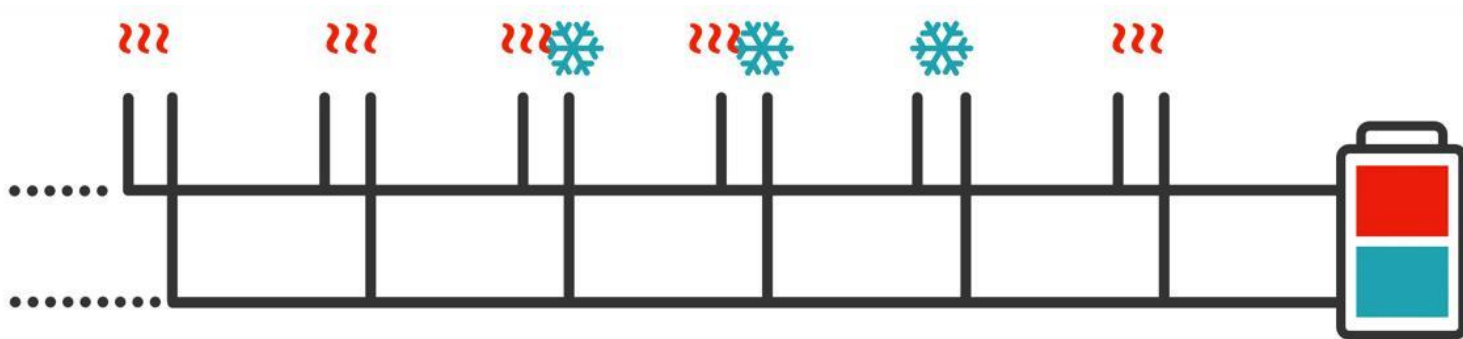
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How ectogrid™ works

How ectogrid™ works

Buildings connected to the same system provide each other with heating and cooling.

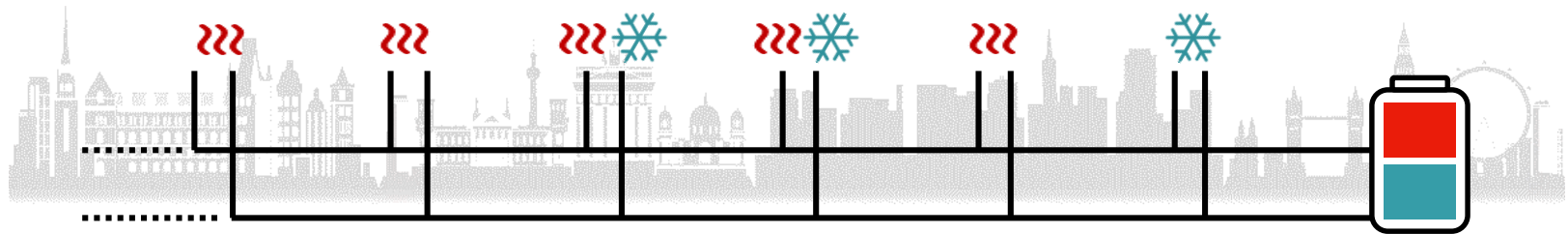
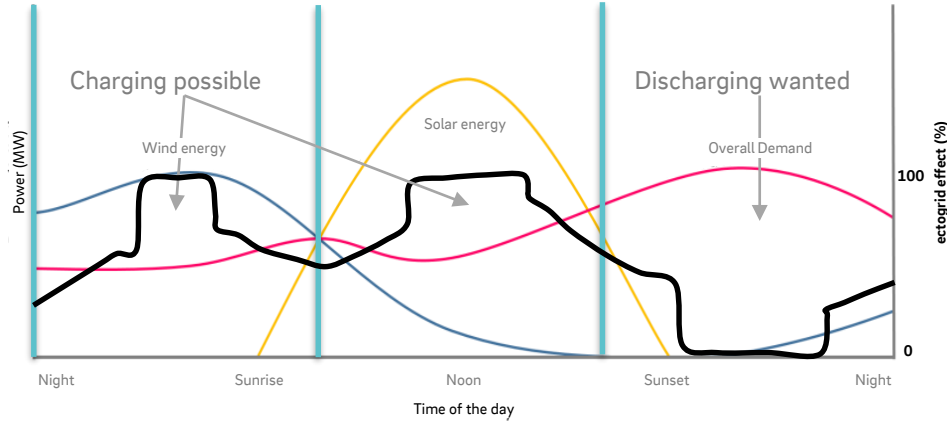
- ✓ The most energy efficient heating and cooling solution
- ✓ Cheaper to build - one grid serves 2 utilities
- ✓ Cheaper to operate
- ✓ Highly flexible (DH, DC, Geothermal, Data Center, Industry, Gas CHP, HP, etc.)



Energy optimization as a Service - ectocloud™



ectocloud™ creates and captures flexibility



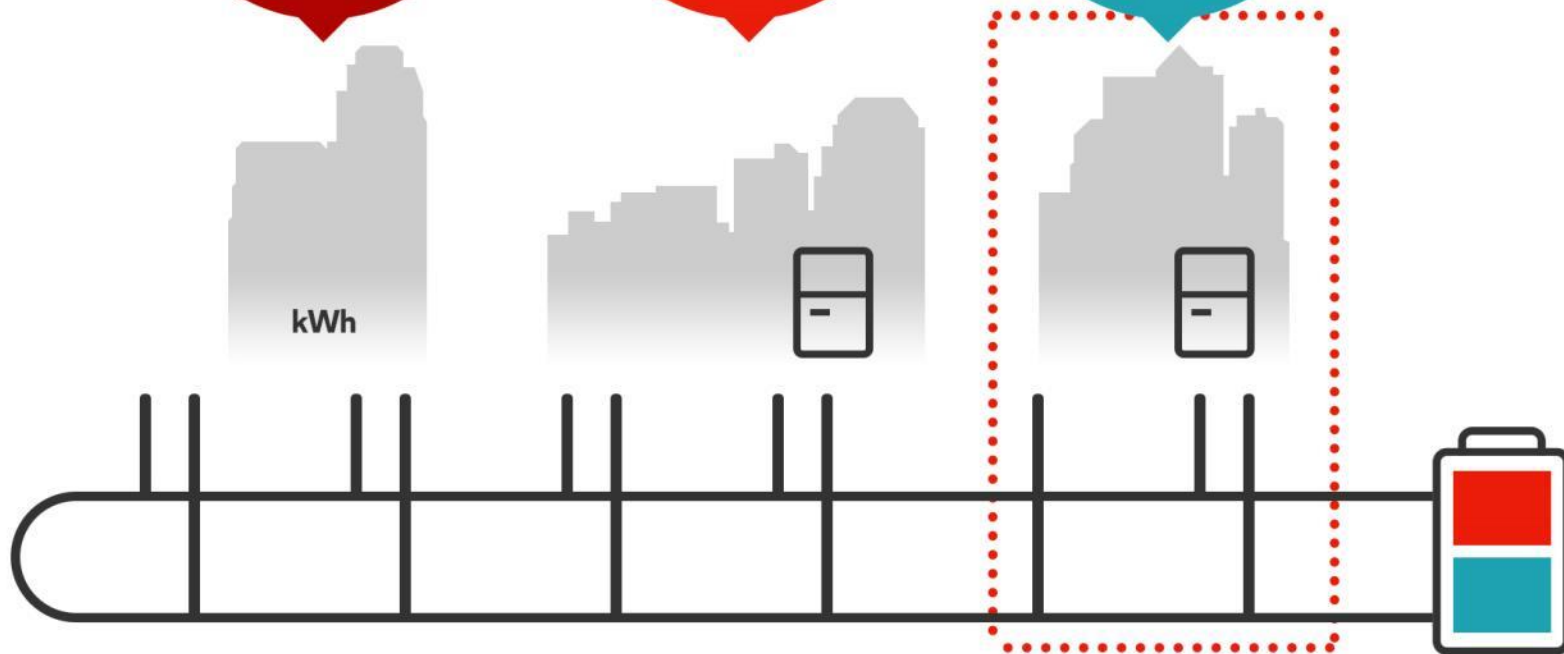
ectogrid™ **Business Model**

**Purchase
energy**

kWh

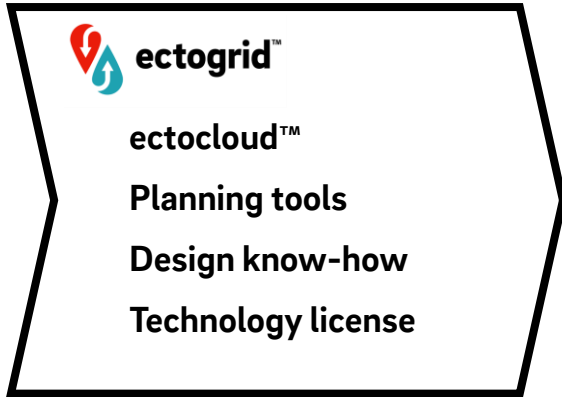
**Own your
equipment**

**Share the
investment**

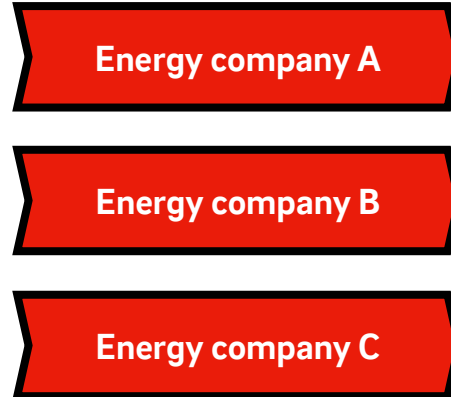


Business model designed for utilizing local competence

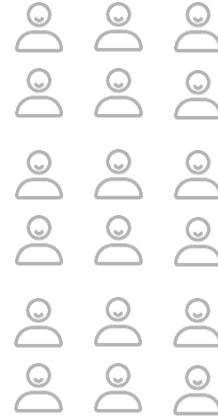
ectogrid™ licensing offer



ectogrid™ partners



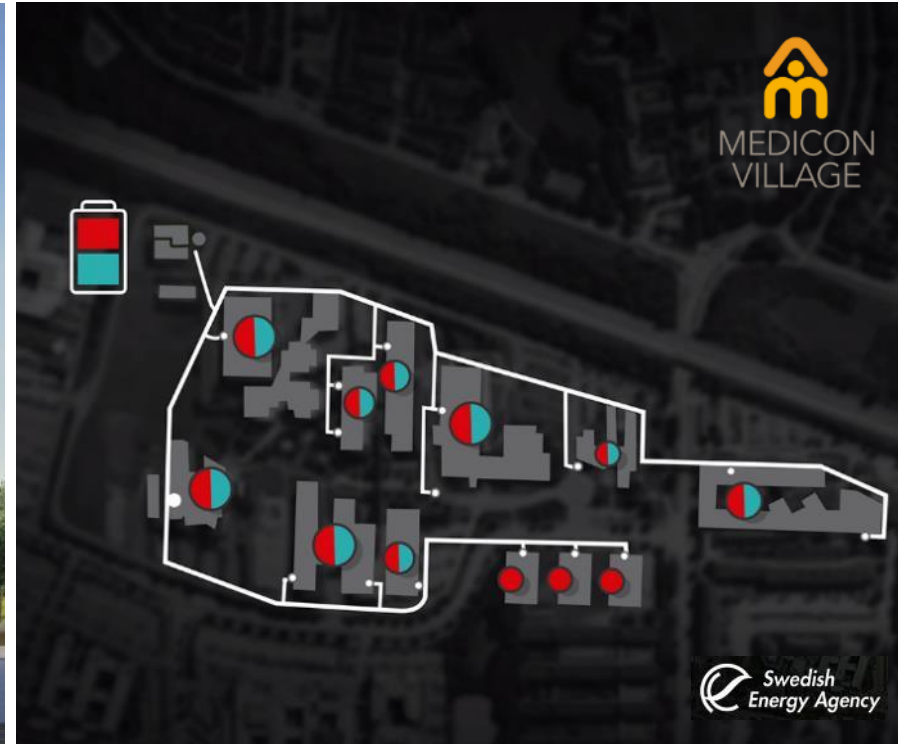
End-customers



The ectogrid™ business model drives CO2 efficient solutions for heating and cooling globally

ectogrid™ Cases

Medicon Village, the world's first ectogrid™, integrating heating and cooling



This is a zero emission energy system

Medicon Village results

District heating
10 GWh



District cooling
4 GWh



Supplied energy

78.5% reduction on supplied energy
20% reduction on customer's energy bill

ectogrid™

Balanced energy
11 GWh

Supplied energy
3 GWh



Balanced energy

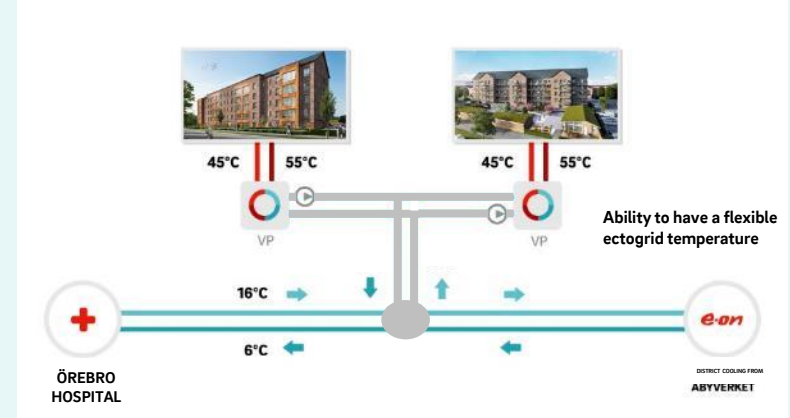
Cooling for Hospital balanced with heating of residential buildings



E.ON solved the heating need of a new city quarter...

...while reducing the electricity need of the existing district cooling grid

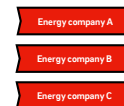
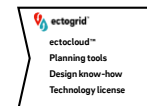
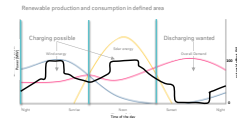
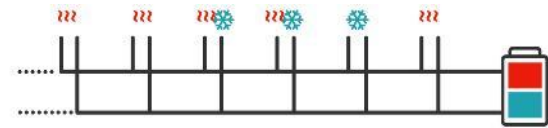
Sustainable and high margin business case



Why ectogrid™?

ectogrid™ – A thermal microgrid solution delivering a zero carbon solution for the worlds heating and cooling needs

- ✓ The most energy efficient heating and cooling solution
- ✓ Cheaper to build - one grid serves 2 utilities
- ✓ Makes use of low temperature surplus heat
- ✓ Energy optimization as a service
- ✓ Creates and captures flexibility
- ✓ Available for all ectogrid™ partners



The background of the slide is composed of three vertical sections. The left section features a dark red background with a pattern of raised, 3D hexagonal shapes. The middle section is a solid, vibrant red vertical stripe. The right section has a teal background with a similar pattern of raised, 3D hexagonal shapes, which are slightly out of focus compared to the left side.

Thank you!

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