

Future of heating in Helsinki

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Helen in brief

Number of employees
in the Helen Group

992

Net sales of the
Helen Group in 2020

1054 EUR
mill.

Total of

1,399 km

of district heating
network

Total of

6,200 km

of electricity
network

In Helsinki, our security of electricity supply
is among the best in the world:

99.9%

We offer world-class expertise

We produce district heat, district cooling, electricity
and services for microgeneration of energy, electric
traffic and more efficient energy use.

Helen is carbon neutral by **2035**

Over a hundred years of urban energy

The electricity company of the City of Helsinki was established
in 1909 in order to create a safer and more environmentally
friendly way to produce energy in a smoky city.



Hanasaari
2021

Hanasaari
2023


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A photograph of a man and a woman looking through binoculars. The man is in the foreground, wearing a brown cap and a dark jacket, holding the binoculars to his eyes. The woman is behind him, smiling, wearing a grey scarf and a headband. The background is a blurred outdoor setting with greenery and buildings.

**Our vision is to be
the most customer-driven energy company in
the market.**

**We give everyone the chance to enjoy the
opportunities of the new energy era.**

Climate change | Urbanisation | New technologies



Megatrends shaping the energy future

Climate Crisis

Urbanisation

New Technologies

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Towards carbon-neutral energy production

Helen has succeeded in its role as a trailblazer throughout its existence. It is constantly seeking and piloting new energy solutions. We aim for a carbon-neutral, cost-effective and reliable energy system.

1

Carbon-dioxide emissions are reduced by 40%

The amount of renewable energy is increased by 25%

The use of coal is halved by 2025 – Hanasaari power plant is decommissioned.

2

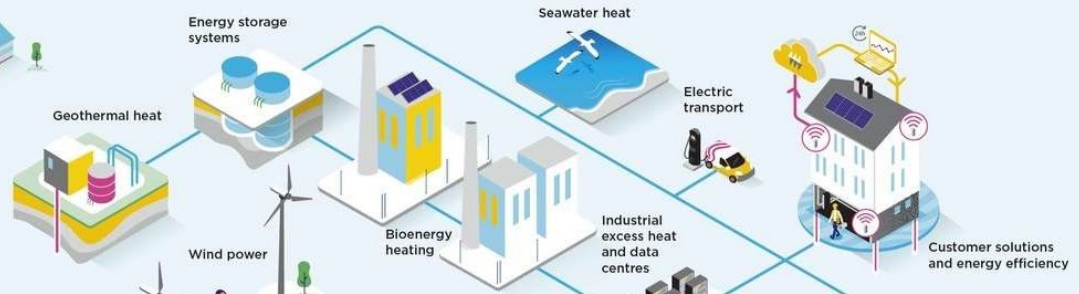
The use of coal is phased out by 2029. Solutions that are not based on combustion are sought for Salmisaari.

Carbon-neutral energy production in 2035

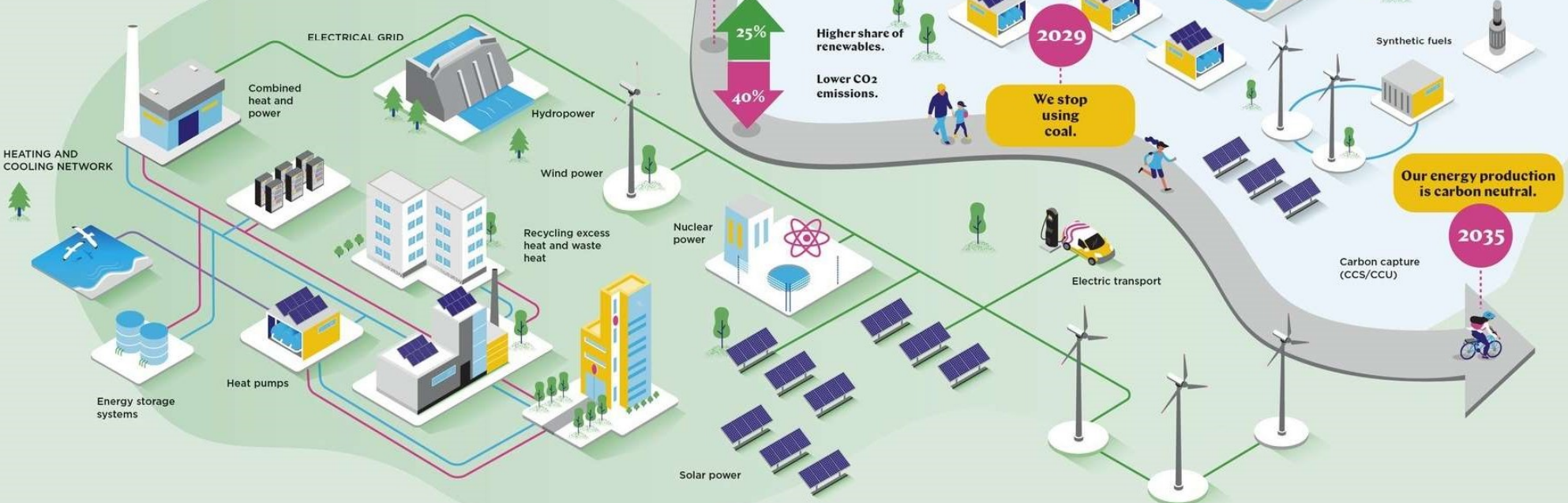
Our flexible and versatile energy system is part of the Finnish circular economy and it serves as an effective platform for managing energy streams and recycling energy.

We actively develop and research new carbon neutral energy solutions.

New solutions



Current production methods and energy sources



2025

25% ↑
40% ↓

Helen replaces coal by heat recycling, energy storage systems and bioenergy heating.

Higher share of renewables.
Lower CO2 emissions.

2029

We stop using coal.

We take advantage of solutions that are not based on combustion.

Our energy production is carbon neutral.

2035

Future of heating

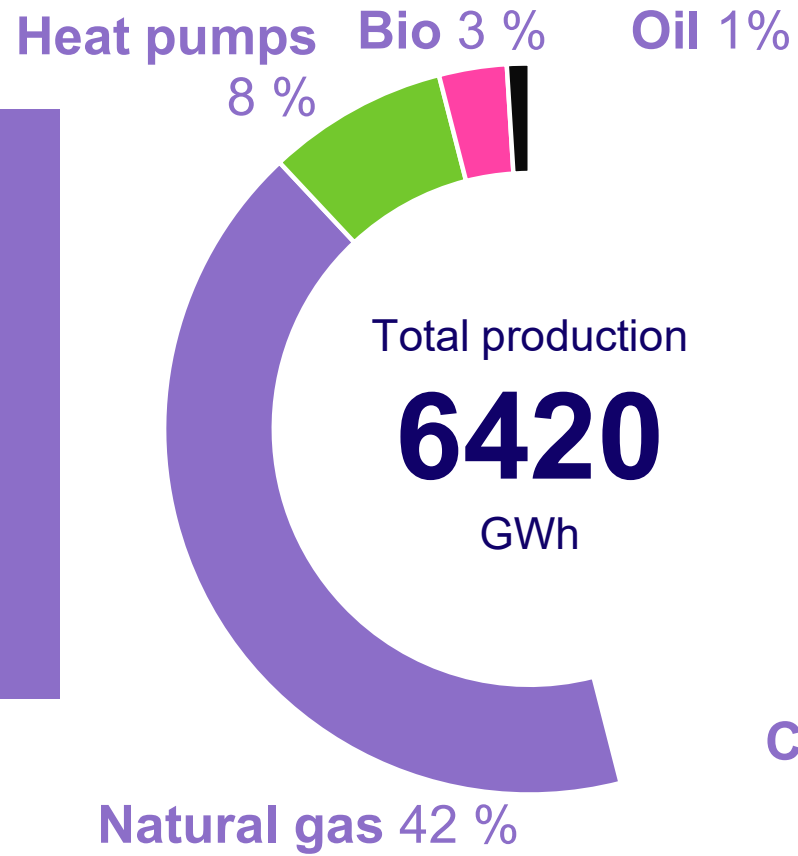
Carbon neutral
Customer-focused
Servicized

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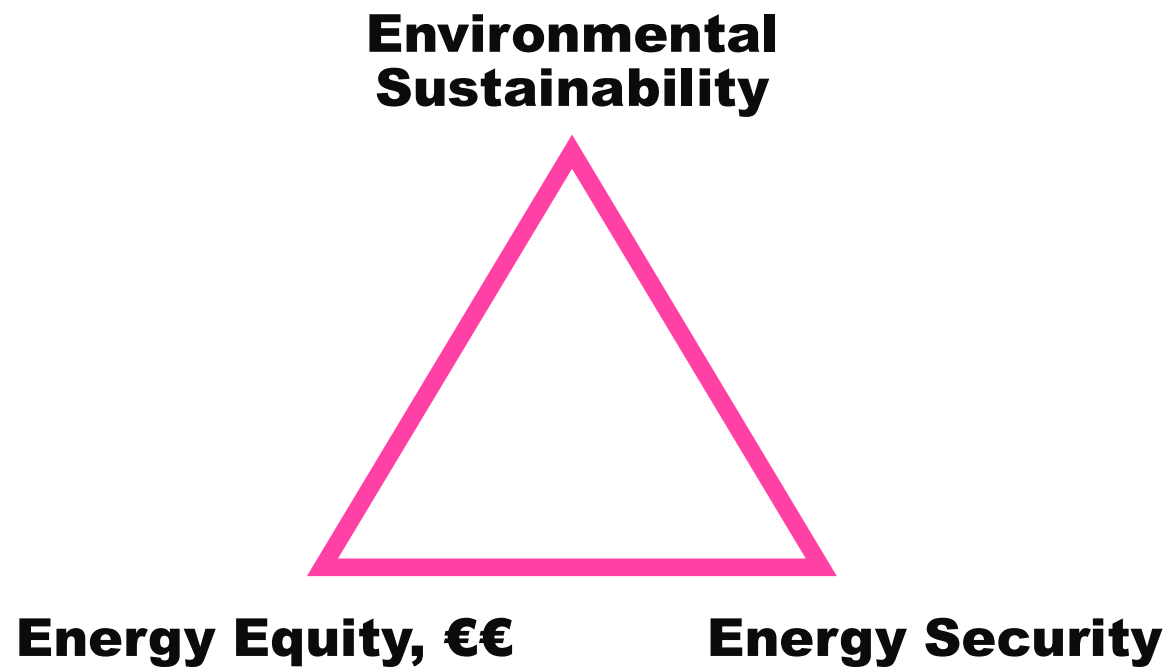


District heat energy sources

2020



CHALLENGE: BALANCING THE ENERGY TRILEMMA



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2030 majority of heat is produced with electricity

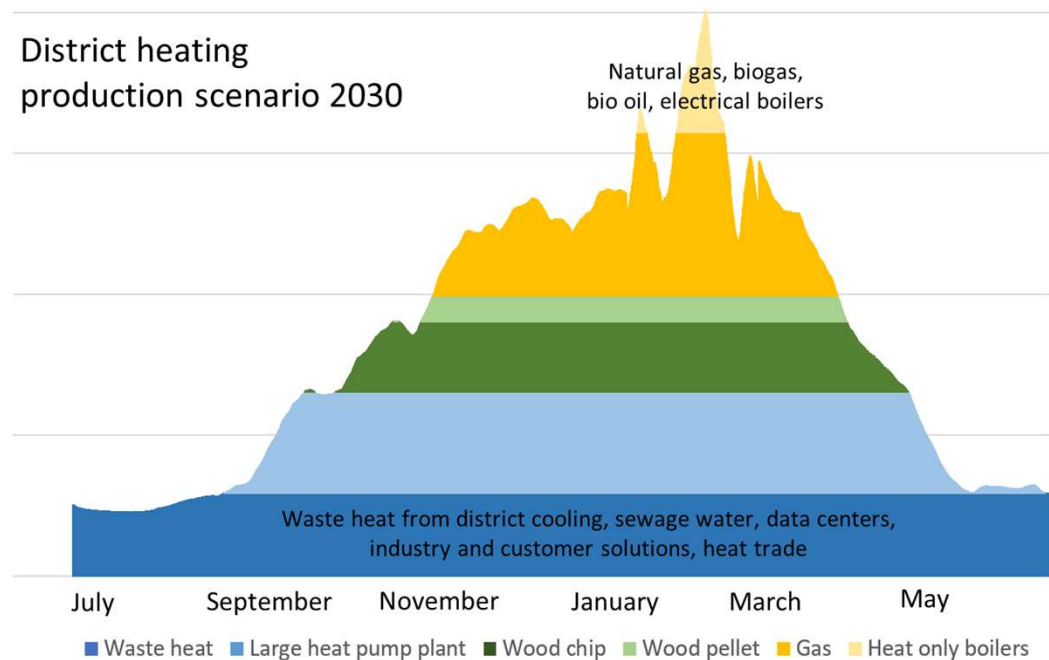
Heat production in 2020

- Sewage water
- Building waste heat
- Data centers
- Industrial waste heat

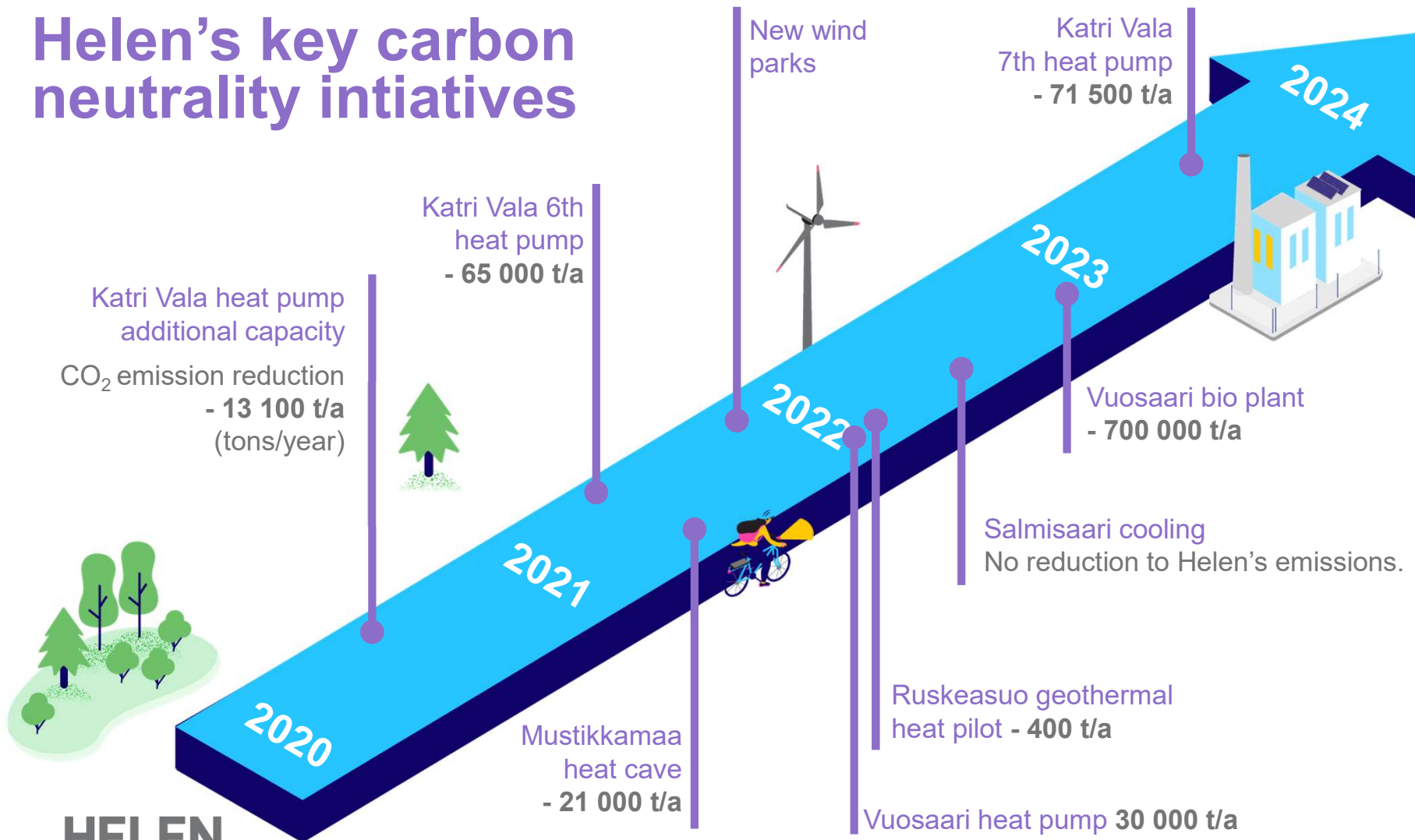
Heat production 2030

- Sea water
- Industrial waste heat
- Geothermal heat

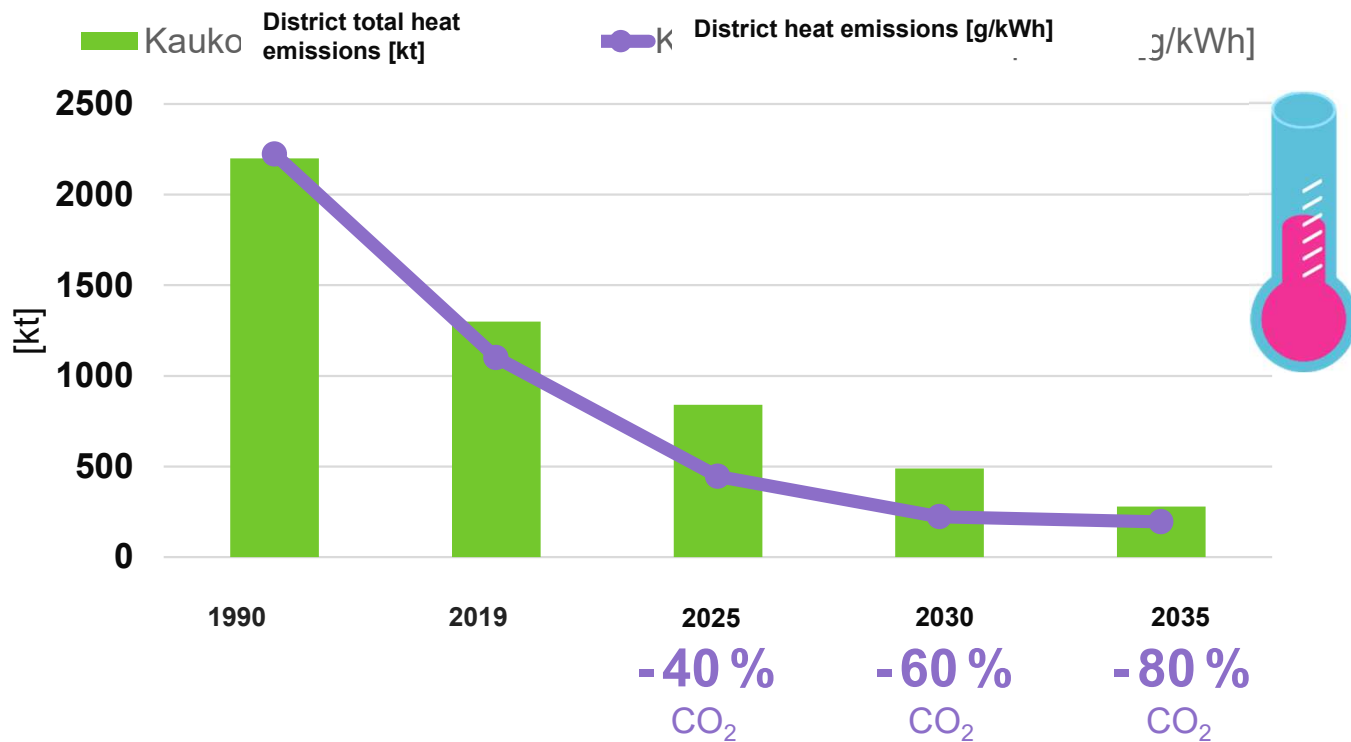
Production scenario in 2030



Helen's key carbon neutrality initiatives



Path to carbon neutral heat production



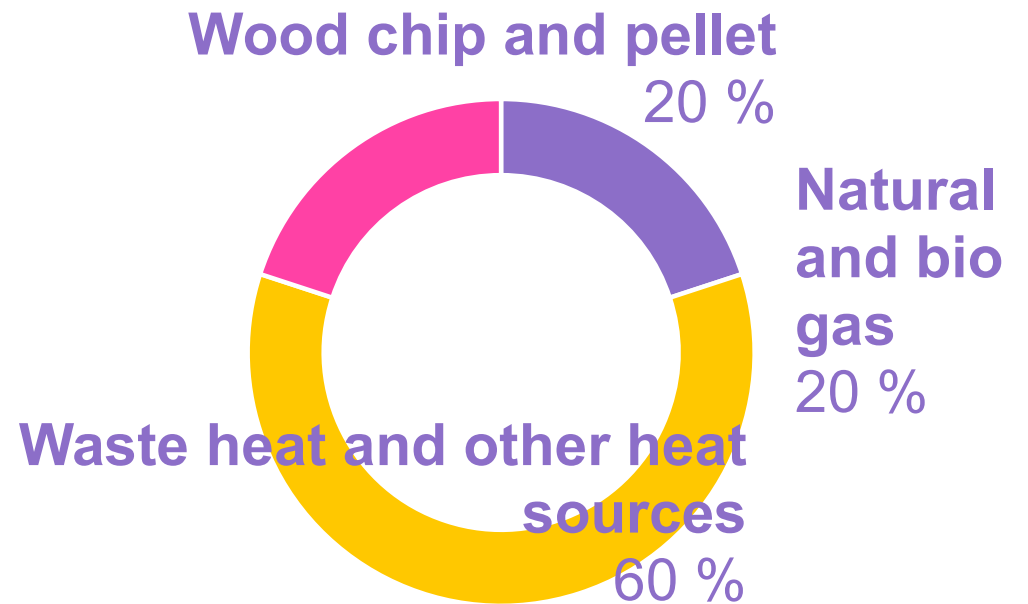
How?

- CO₂-free production
- Heat storage
- Optimizing production and consumption
- Energy efficiency
- Customer solutions



Heat production scenario

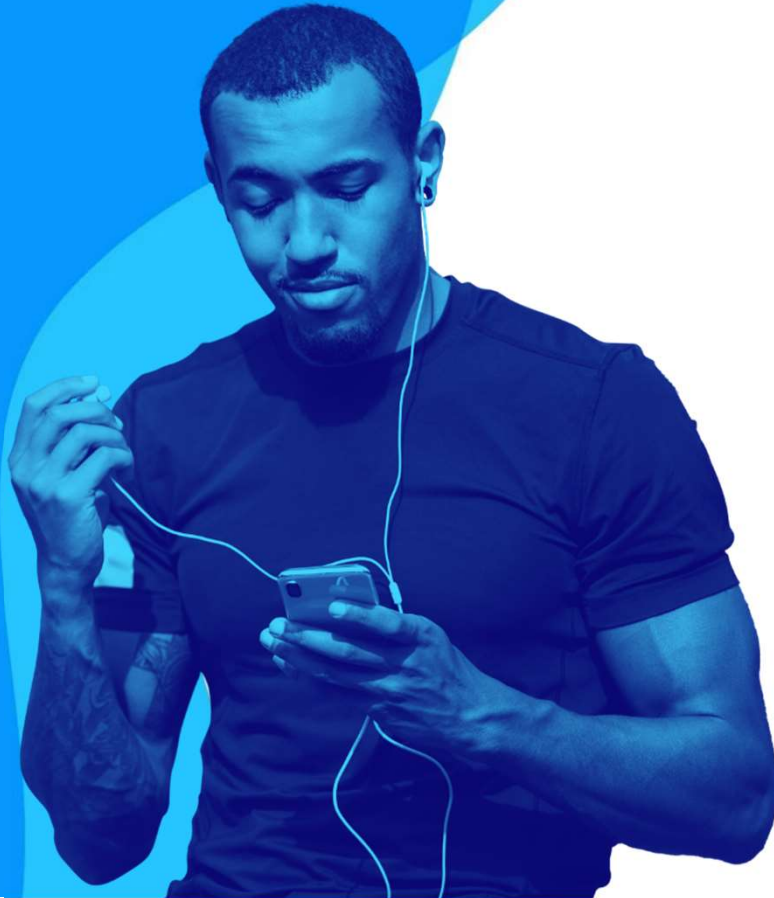
2030



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Helen Ventures

Our investment focus



“We seek to partner with innovative startups and entrepreneurs renewing the energy sector.”

- E-mobility
- Renewable energy technology
- Smart energy solutions
- Distributed energy solutions
- Circular economy and decarbonisation
- Digital solutions applicable to energy sector

Helen Ventures portfolio



**Decarbonisation cannot be
achieved without involving
customers**

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A young girl with dark hair and a yellow turtleneck sweater is smiling and showing her hands, which are covered in colorful paint (pink, blue, yellow, purple). She has a vertical pink line on her forehead and yellow and pink paint on her cheeks. Her white shirt has colorful handprints on it. The background is a plain, light-colored wall.



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YHDISTETÄÄN VOIMAT

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