Elegantly simple,
remarkably invisible

Steady
Energy

We’re making nuclear simple.

Simple means cost-effective.

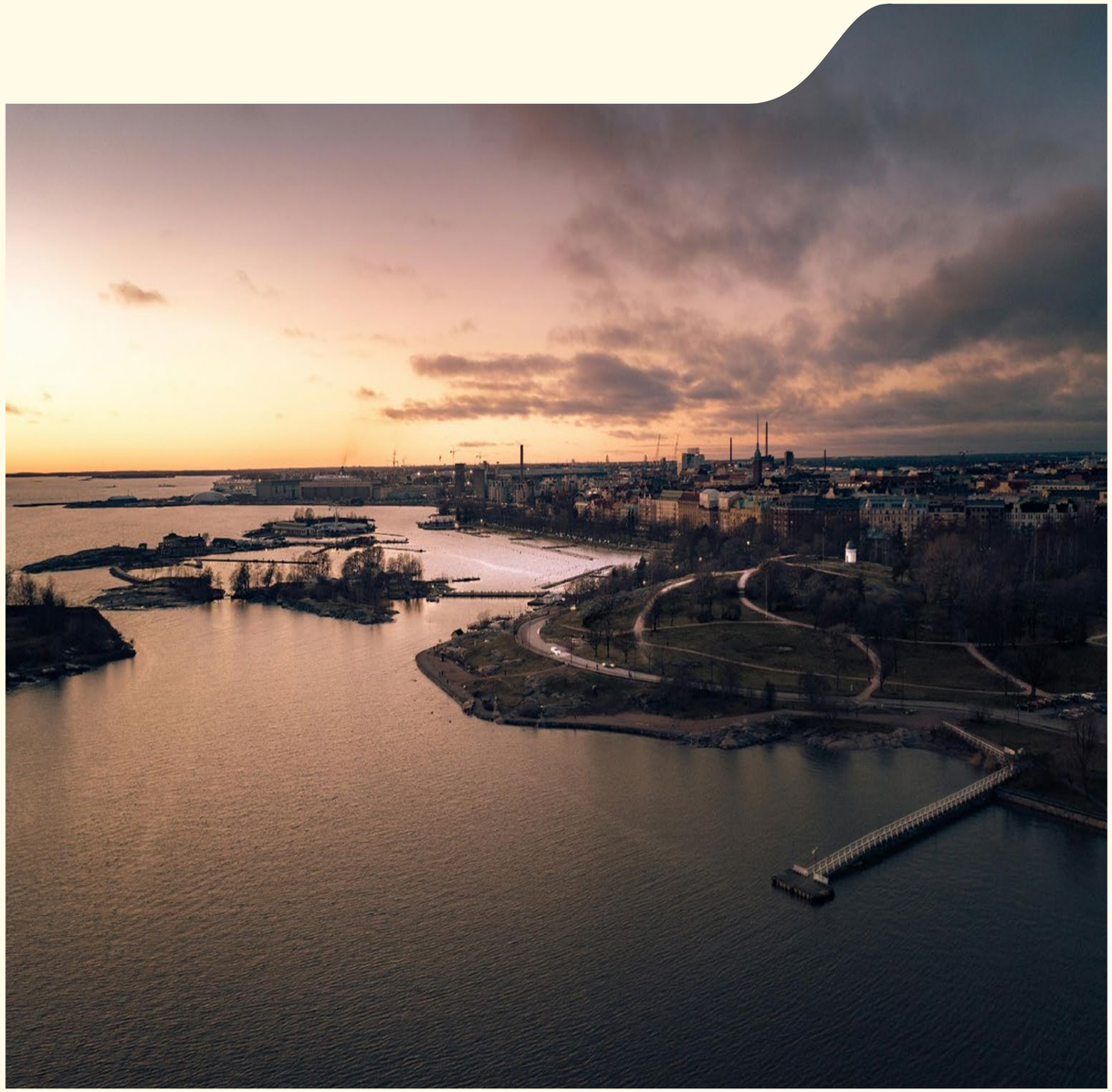
Conventional nuclear is too expensive and too complex.

Cost of nuclear heat is 1/3 compared to nuclear electricity

Steady Energy

Turning possibility into progress

- A Finnish nuclear technology company —founded in May 2023
- Spinoff from Technical Research Centre of Finland (VTT)—with VC backing (Yes VC and Lifeline Ventures)
- Staff: 25 professionals adding up 300+ years of relevant experience, with nuclear industry, research and regulator
- 200 professionals working on the development of the design (VTT,Tractebel, Sweco…)



The Team —a leading collective of engineers, scientists and business professionals

Tommi Nyman
Chief Executive Officer

Hannes Haapalahti
Chief Technical Officer

Petteri Tenhunen
Chief Legal Officer

Matti Pentti
Chief Commercial Officer

Juho Vierimaa
Head of Licensing and Quality

Lauri Muranen
Head of Public Affairs

Juha Isometsä
Head of Mechanical Engineering

Fabien Chareyre
Head of System Engineering

Hannu Tuulensuu
Head of Nuclear Safety

Antti Teräsvirta
Head of Process Engineering

Riku Mattila
Senior Advisor, Reactor Safety

VTT
Acts as a separate R&D department (~60 persons)

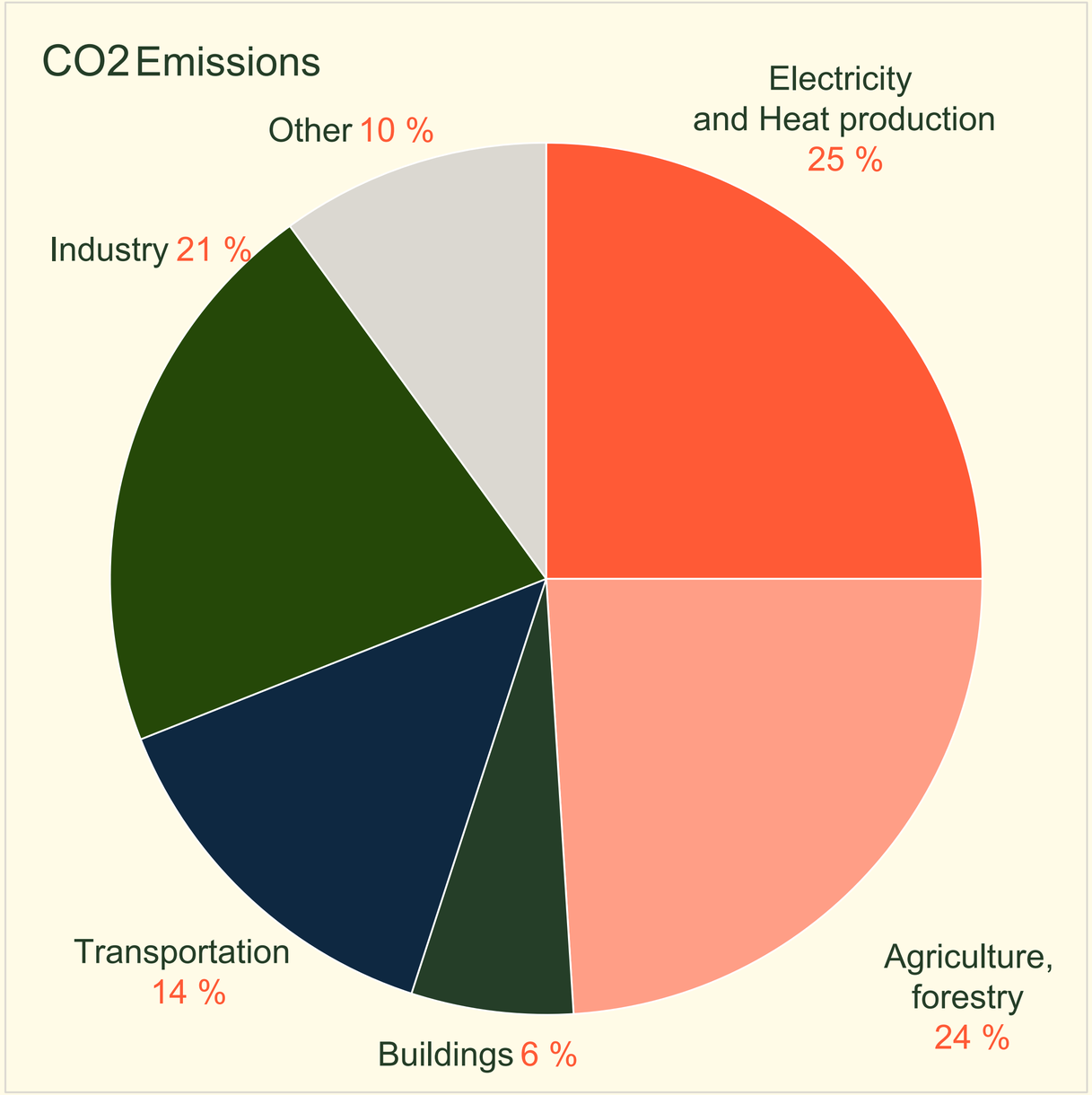

House by house, block by block,
city by city

It’s an unsteady planet

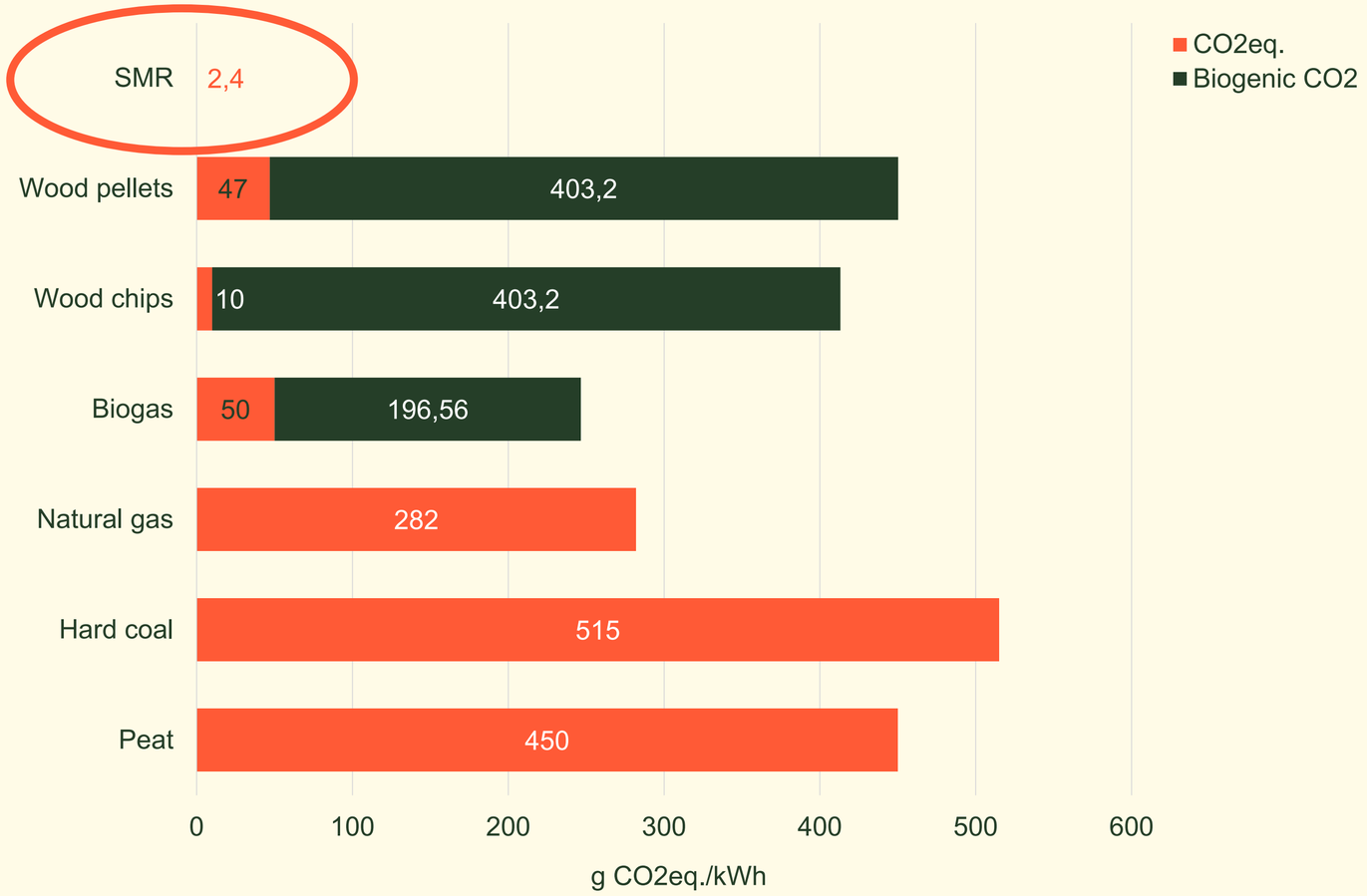
Where do CO2 emissions come from?

10 %

of the total CO2 emissions
are born from heating water,
steam or air up to temperature
below 150 °C



Nuclear energy has as low CO2 emissions as offshore wind



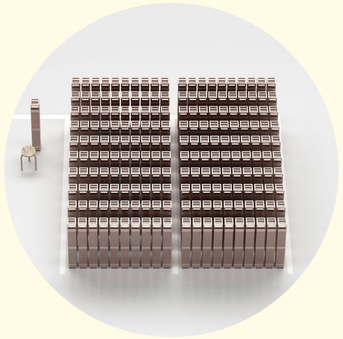
Life cycle greenhouse gas emissions of different heat sources. Biogenic carbon emissions of the heat produced with wood fuels or biogas are marked separately.

VTT, Ecoinvent database and Sokka et al. 2019 (peat)

But it is not only about the emissions…

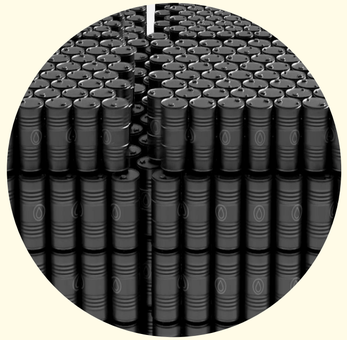
Steady Energy

Nuclear energy can help decouple energy production from the use of natural resources



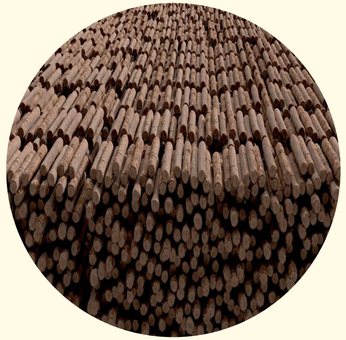
1.

Fuel consumed by a single reactor over it's entire lifetime would sit inside two parking spaces.



2.

It would take 12.5 million barrels of oil to produce the same amount of energy that a single LDR-50 produces during its lifetime.



3.

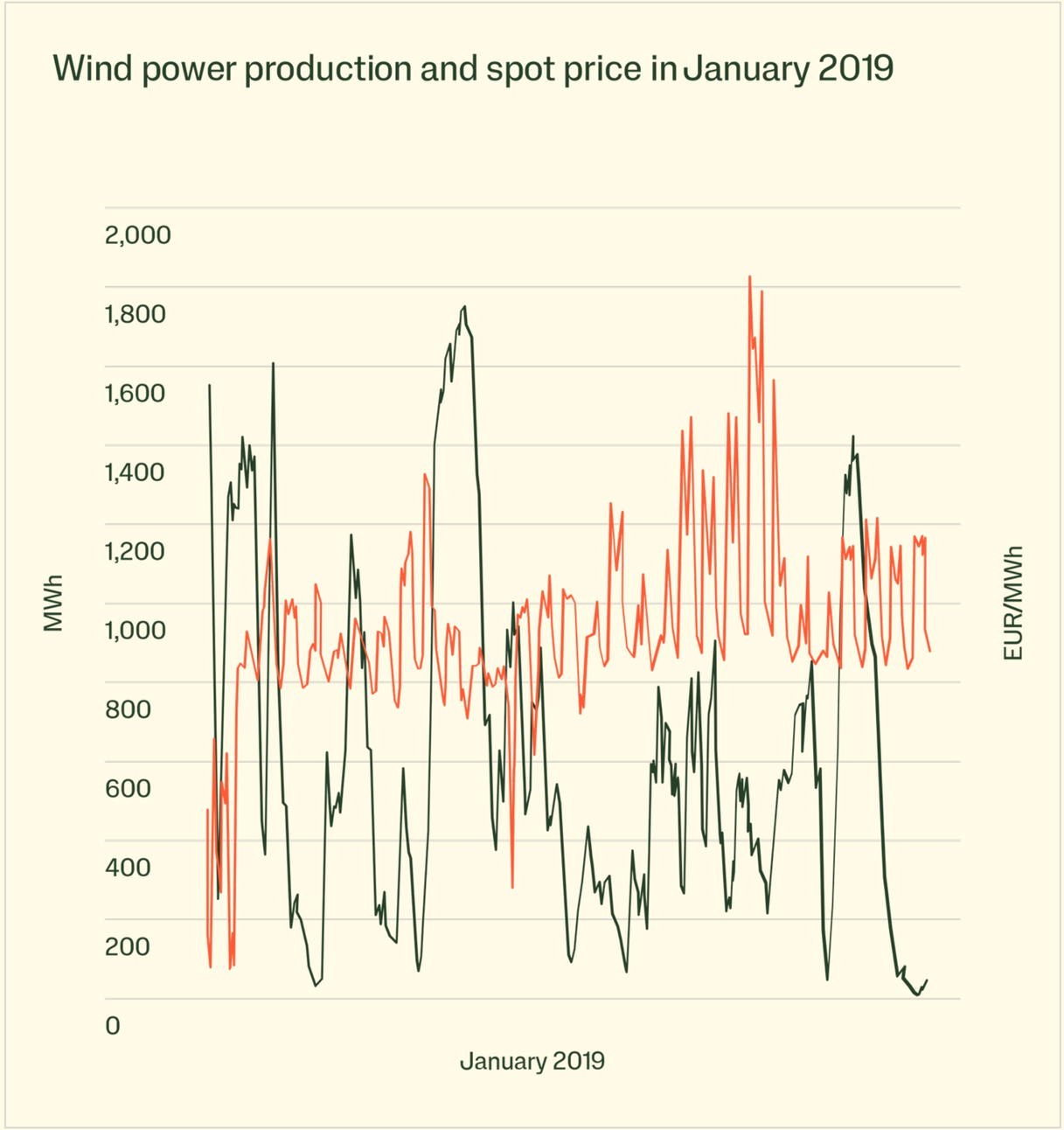
It would take 10 million cubic metres of wood to produce the same amount of energy that a single LDR-50 produces during its lifetime.

And of course, it's also about the cost

- Nuclear heat is simple, scalable, modular and highly competitive. LCOE = <40€/MWh
- Lower operating temperatures and pressures, no need for a turbine -> lower building costs
- C. 95% of the heat can be utilized and no energy is wasted in energy conversions
- Cost of producing nuclear heat is 1/3 compared to **new nuclear** electricity
- Cost is competitive compared to competing energy sources

Why nuclear?
Steady production

- Nuclear energy and wind power are the only truly scalable sources of energy in the Nordics
- Heat demand is the highest during cold snaps when wind production is often low
- Electricity demand is expected to rise significantly and is needed to decarbonize the industrial and transport sectors



It is not just for district heat

01

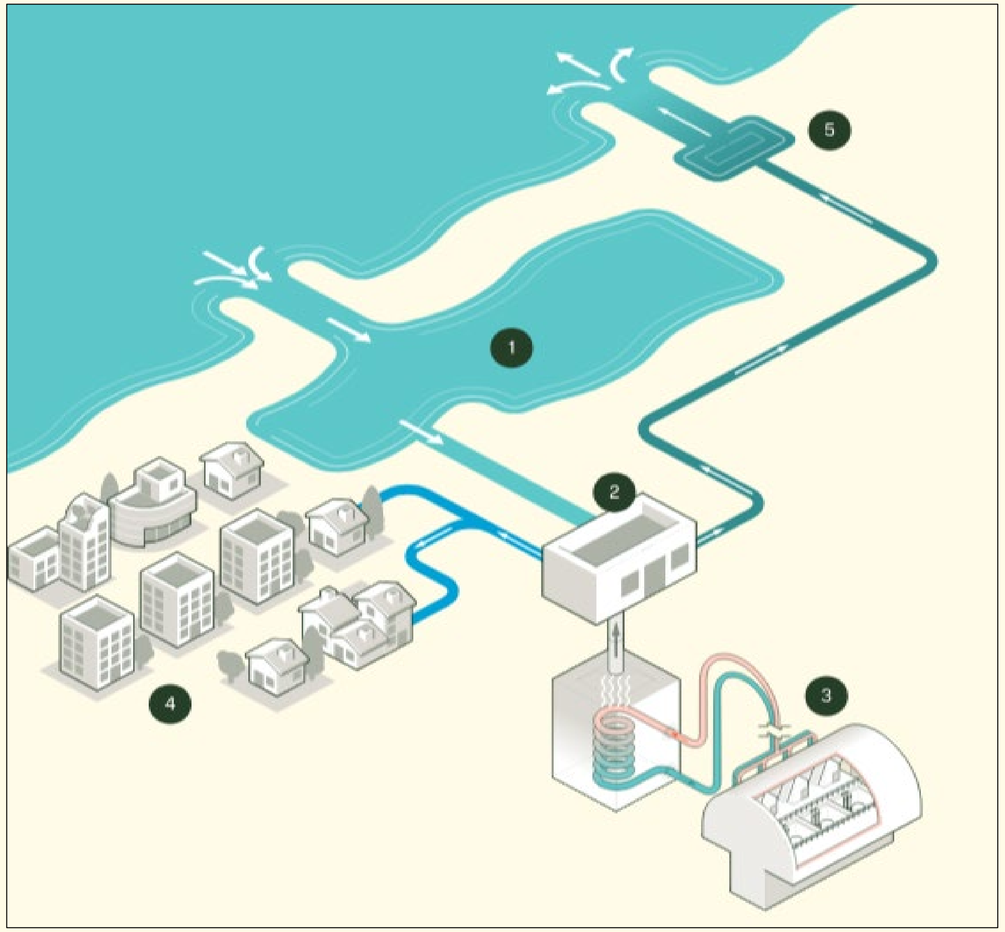
LDR-50 is suitable for number of low temperature heat applications

- District heat
- Desalination
- Process industry

02

Services for

a. Nuclear fuel
b. Nuclear operation and maintenance
c. Waste management



The output of fresh water from a 4-unit LDR-50 desalination plant would be 44,000 – 88,000 m3 (cubic meters) or up to 23 million US gallons per day.

1. Seawater intake
2. Desalination plant
3. Process heat from the LDR-50 to the desalination plant
4. Fresh water delivered to consumption in homes and businesses
5. Saline water returned to the sea

Our product

01

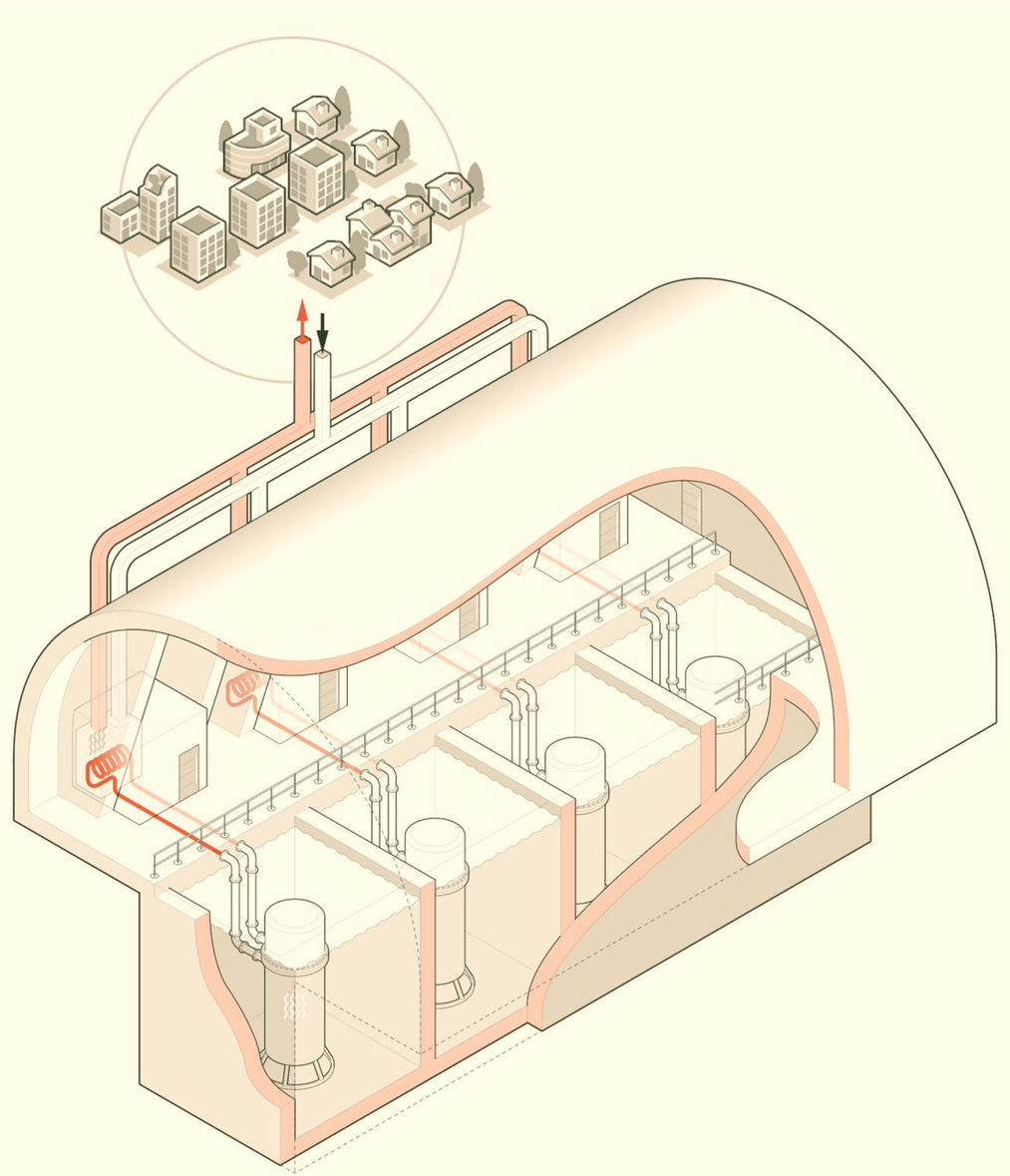
Nuclear heating units

Consists of one or more
50 MW units

02

Business model – construction, operation and maintenance

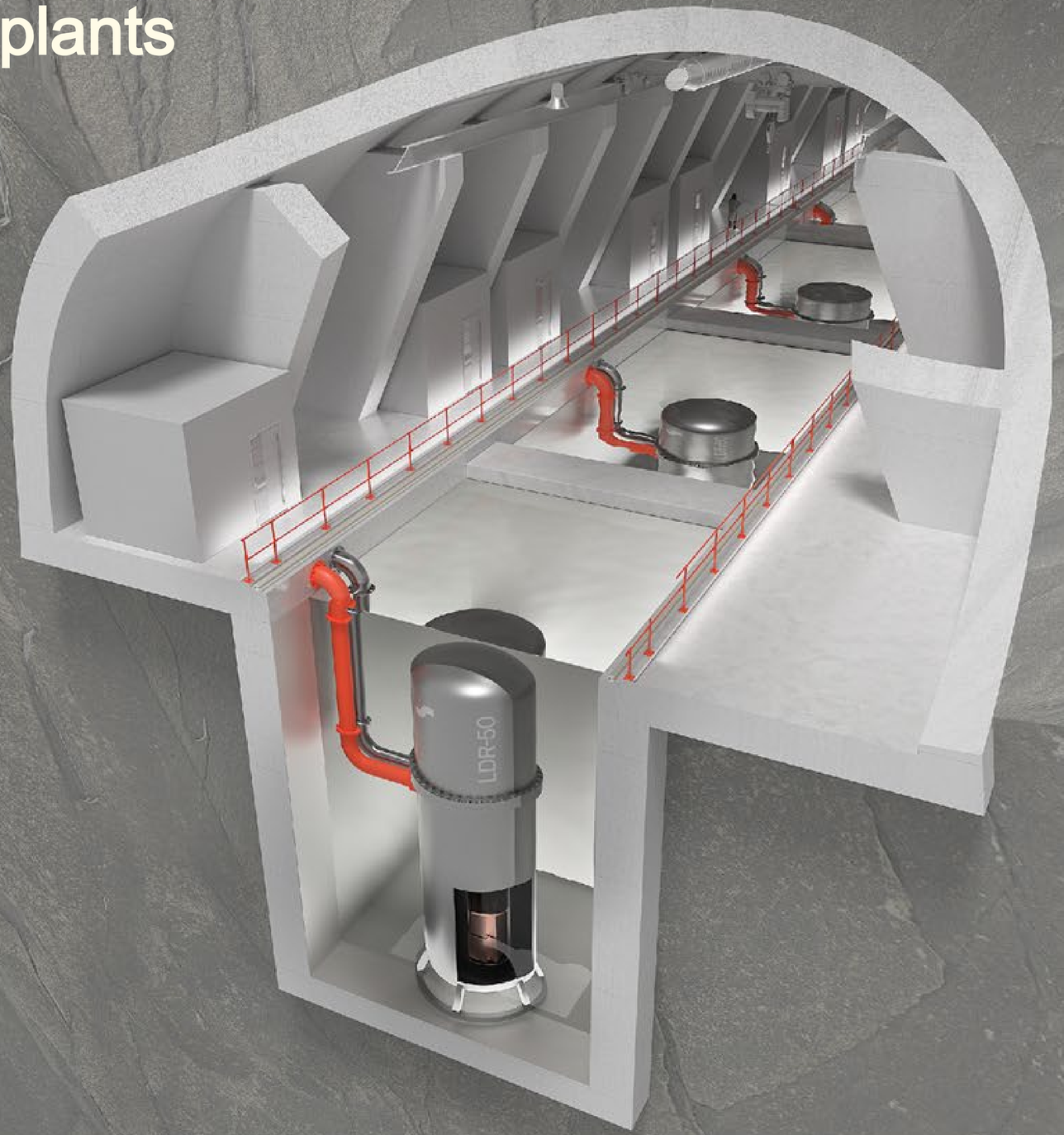
We offer our clients turnkey solutions for their heat production without the need for them to build extensive nuclear organizations



Our product is invisible

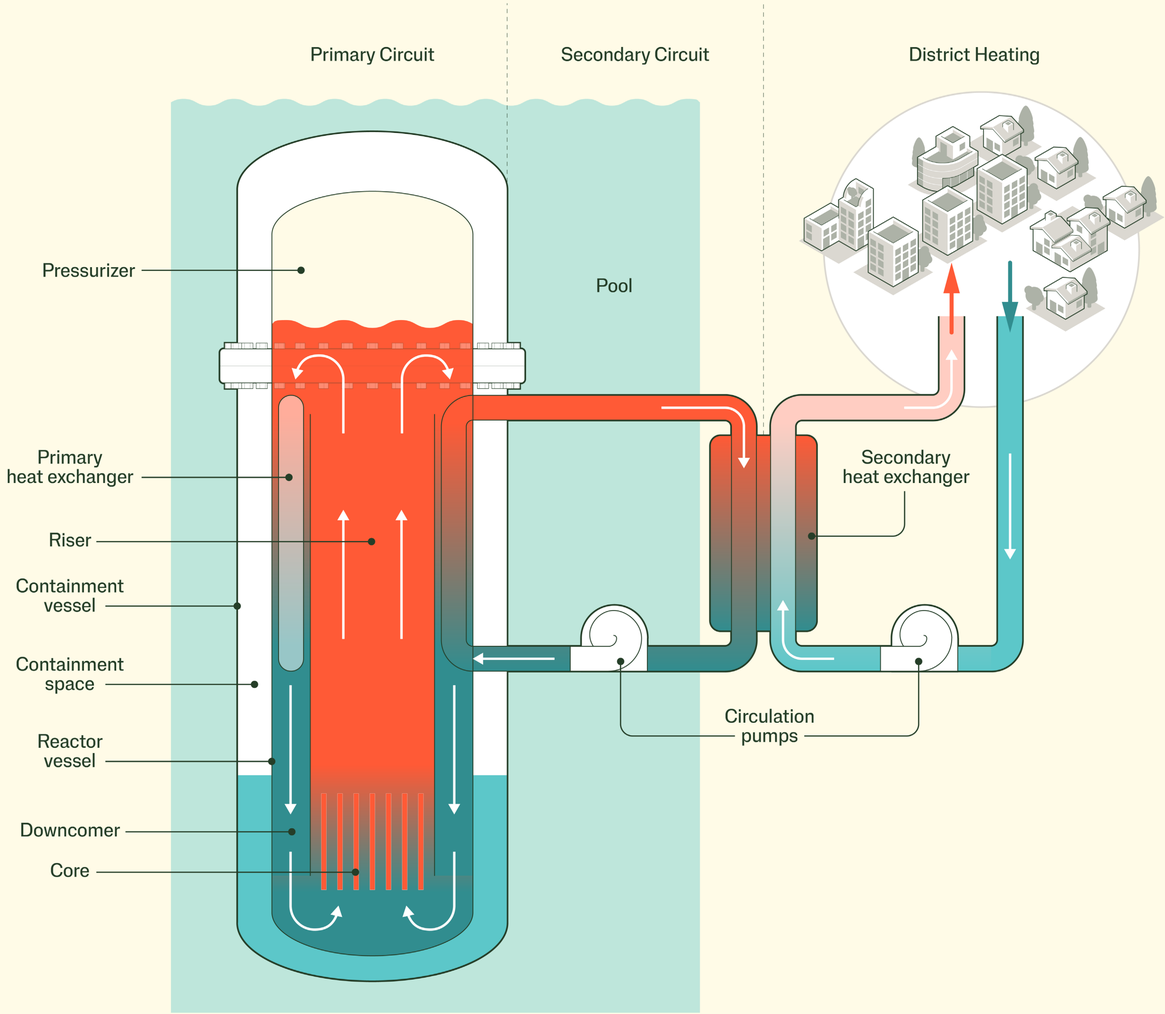
- No chimneys or smoke
- No piles of coal and biomass
- No oil or gas tanks
- No trucks or ships
- No pollution to land, water or air
- No large industrial parks

We will build our plants underground



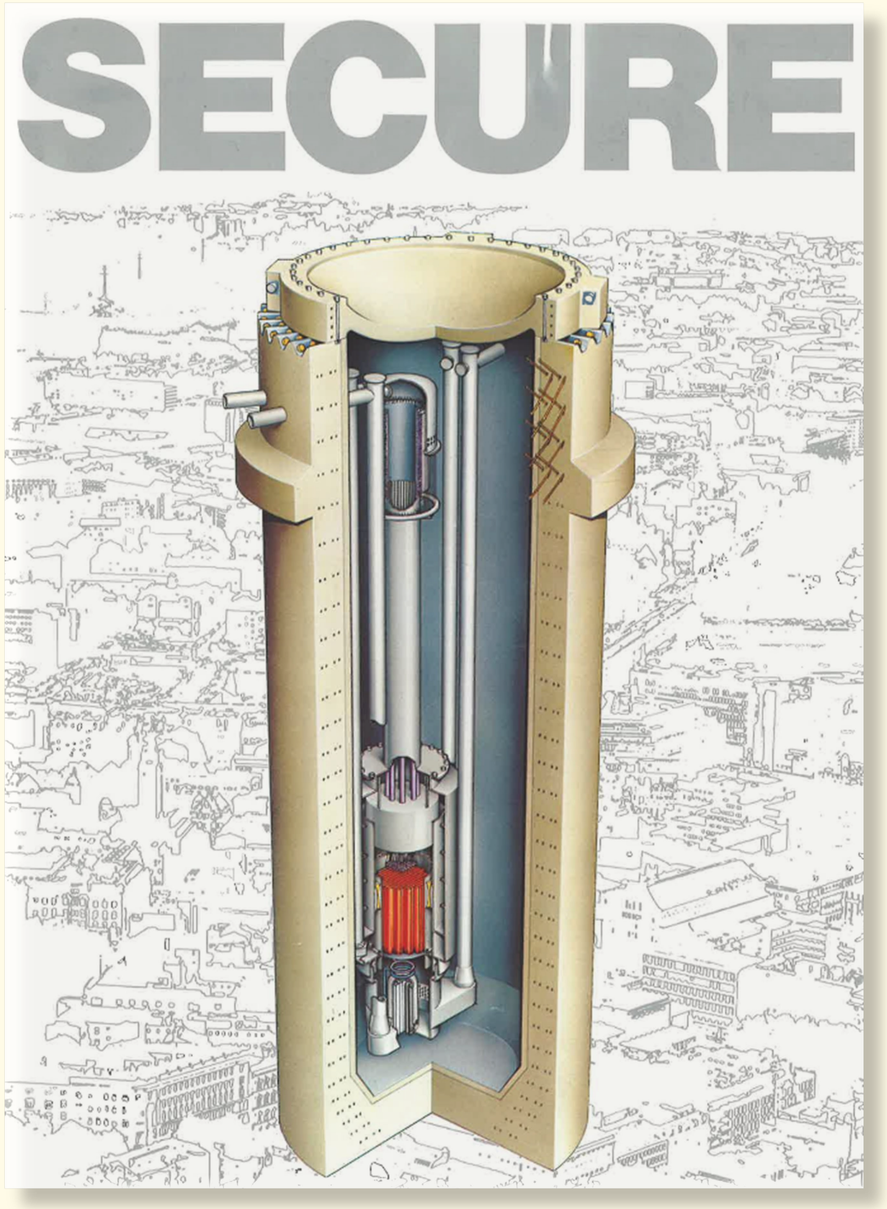
Technological simplicity

- Use Light Water Reactor technology, commercially mature for business without technology risk (TRL 9)
- Thermal power 50 MW per reactor
- Refueling every 23 years
- “Tried and tested” light water technology
- Only few moving parts
- Very low operating temperatures and pressures
- The reactor is the size of a shipping container
- Passive heat removal system
- Physically separated water circuits, lowest pressure inside reactor—therefore possible leak retained inside plant



Why now?

- The idea is not a new one. Nuclear district heat from larger plants is utilized in number of countries: Switzerland, China, Chechia, Hungary…
- SECURE: Finnish-Swedish heat only reactor from the 1970s
- Finnish government program: “One aim of the renewal of the nuclear act is to make it easier to build small modular reactors and to support the development of district heating SMRs.”
- Updated STUK regulations regarding siting of SMRs



SECURE: Safe And Environmentally Clean Urban reactor. 1977

Market traction is established

- Option to deliver 15-20 units in Finland
- Pre-engineering deal with Kuopion Energia (up to 5 units)
- Letter of intent with Helen (up to 10 units)
- Letter of intent with Keravan Energia
- Letter of intent with US based manufacturing company

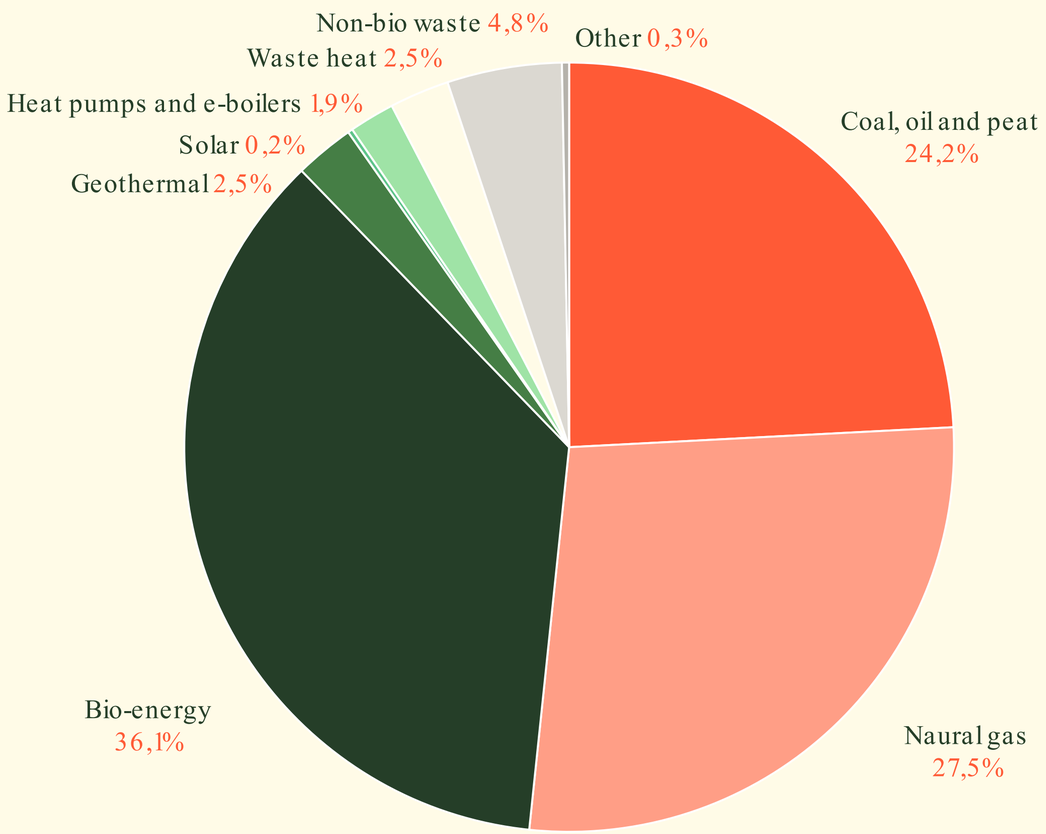
Main market for district heat is in Europe

→C. 40%+ of all energy use is heating (homes, industry..)

→Share of district heating in Europe is around 10-15%(60 million)

→Share of fossil fuels and biomass of total production is around 90%

Heat sources for district heating in Europe



Immediate marketof tens of billions €

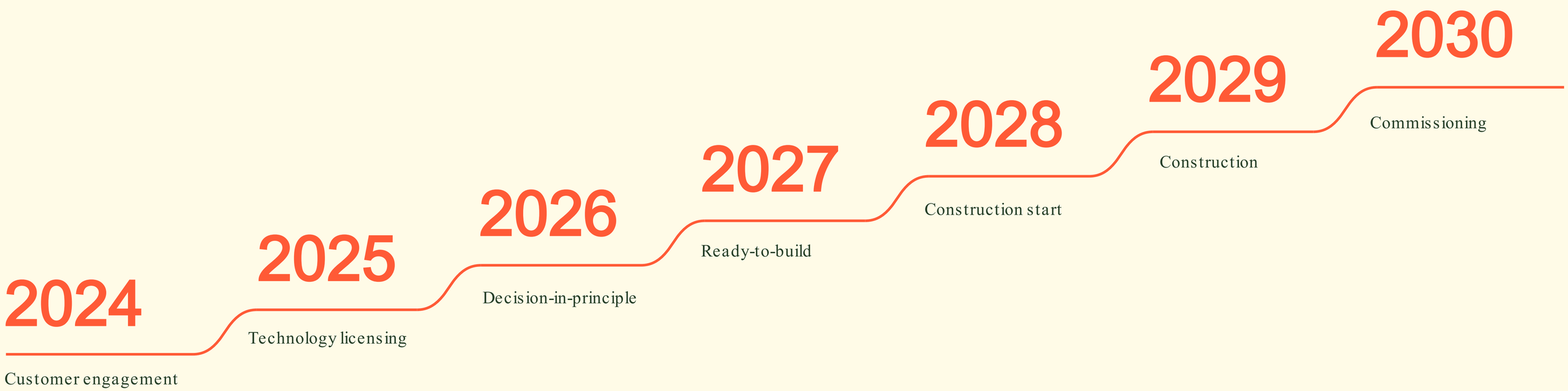
District heat, industrial heat, desalination

Industrial h
US
Europe

District he	(unit
Poland	20
Sweden	5(
Czech Re	3(
Finland	2(
Baltics	1(

Desalina
EU
Middle E
US

Towards first commercial plant



Decision on R&D pilot plant investment

Construction start of the pilot plant

Safety demonstration experiments with R&D pilot plant

Decision on the first commercial plant investment

Construction and building permits

First commercial plant in operation

Thank you!

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Thank you!

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