# An outlook on the rapid global nuclear power development

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# Global Uniper at a glance

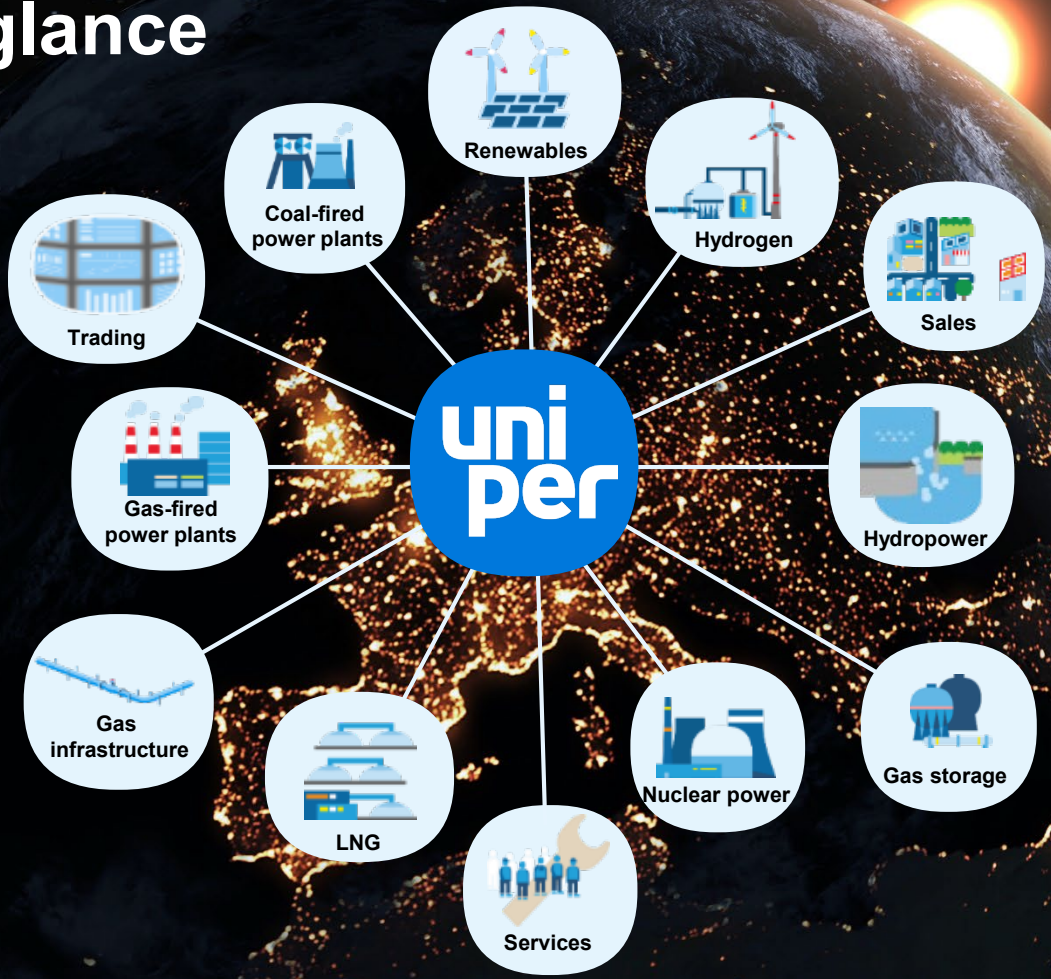
**6,863** employees ensure security of supply in Europe

Active in more than **40** countries

**170,92 billion euros** in sales (2023)

**6,367 billion euros** Adj. EBIT (2023)

**~ 22.4 GW** generation capacity



# Nuclear power – capacity today

Nuclear energy accounts for 10% of global electricity generation, with 440 reactors operating in 32 countries.

Nuclear energy is the largest source of clean electricity in OECD countries and in Europe.

Over their lifetime, nuclear reactors have avoided 77 gigatonnes of $CO_2$ equivalent from coal power generation.

Sweden has 6 nuclear reactors in operation, with a combined net capacity of 6,9 Gwe. In 2022, nuclear generated 29,4% of the country's electricity.

# Nuclear power build out – current plans

60 reactors are under construction across the world.

2 reactors are under construction in the EU.

A further 92 reactors are planned and 343 are proposed globally. In the EU 12 are planned (2 in a first phase in Sweden), while 45 are proposed.

Planned = Approvals, funding or commitment in place, mostly expected to be in operation within the next 15 years.

Proposed = Specific programme or site proposals; timing very uncertain.

# Extended operating time has much to offer


Today all operating Swedish reactors have a planned operating time of 60 years (originally 40).

The decisions to extend the operating time has been followed by extensive modernization and safety upgrade projects.

Extended long-term operation to 80 years of Swedish NPP fleet can:

- Retain fossil free plannable power for 20 years (~ 7.000 MW)
- Add fossil free plannable power over 20 years (~ 1.000 TWH)

# Nuclear Life Cycle is key to success

Waste management a challenge for operation, decommission and for new nuclear. Uniper have strong focus on developing new solutions and technologies, by our self and with our partners.

Safe and cost-effective decommissioning one condition for future nuclear. Uniper develops and proves this with our internal decommissioning program in Sweden

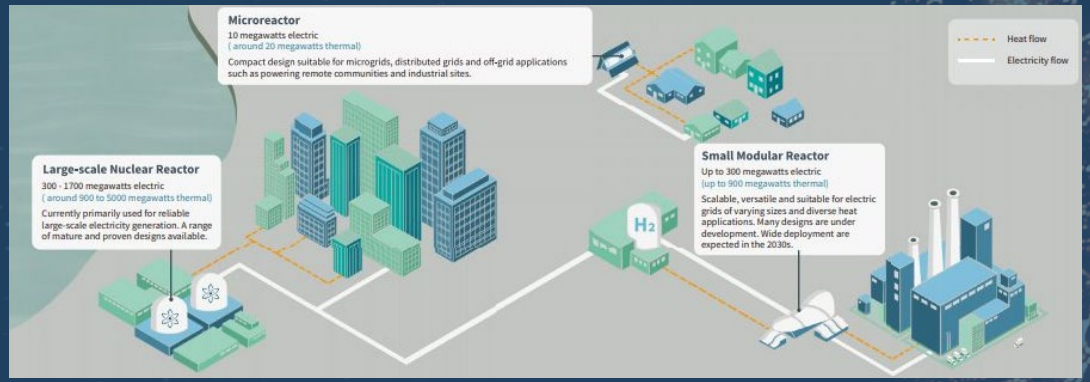
Learnings and experiences gained from todays decommissioning and waste management - experience feedback to new nuclear

# Nuclear necessary to reach climate objectives

In recent years, the need for urgent climate action has become the focus of ever greater attention.

Energy is critical for the attainment of climate objectives

In addition, it has the potential to increase its integration with other non-fossil energy sources in a future decarbonised energy system.




Source: UNECE

**“International climate objectives will not be met if nuclear power is excluded“**

United Nations Economic Commission for Europe (UNECE)

# A changing European nuclear scene

Nuclear energy has gradually become an increasingly prominent part of EU energy policy


Fit for 55 package

The EU taxonomy – nuclear energy included as a means to achieve the green transition

The RePowerEU plan - nuclear has a role in security of supply

Net-Zero Industry Act - confirmed the strategic nature of projects relating to nuclear energy

Electricity Market Design Directive - public authorities are encouraged to invest to increase electricity production

The European Nuclear Alliance
COP28 declaration
The inaugural Nuclear Energy Summit in Brussels
The Commission's 2040 climate target communication
The European Industrial Alliance for SMRs
The European Investment Bank

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# A changing European nuclear scene

Nuclear energy has gradually become an increasingly prominent part of EU energy policy


"The decarbonisation of Europe's energy system implies the massive deployment of clean energy sources with low marginal generation costs, such as renewables and nuclear."

Mario Draghi, The future of European competitiveness – A competitiveness strategy for Europe, September 2024

# Swedish Government determined to succeed

Photo: Elima Mwinyipembe/Regeringskansliet

Shown an unwavering determination since the taking office

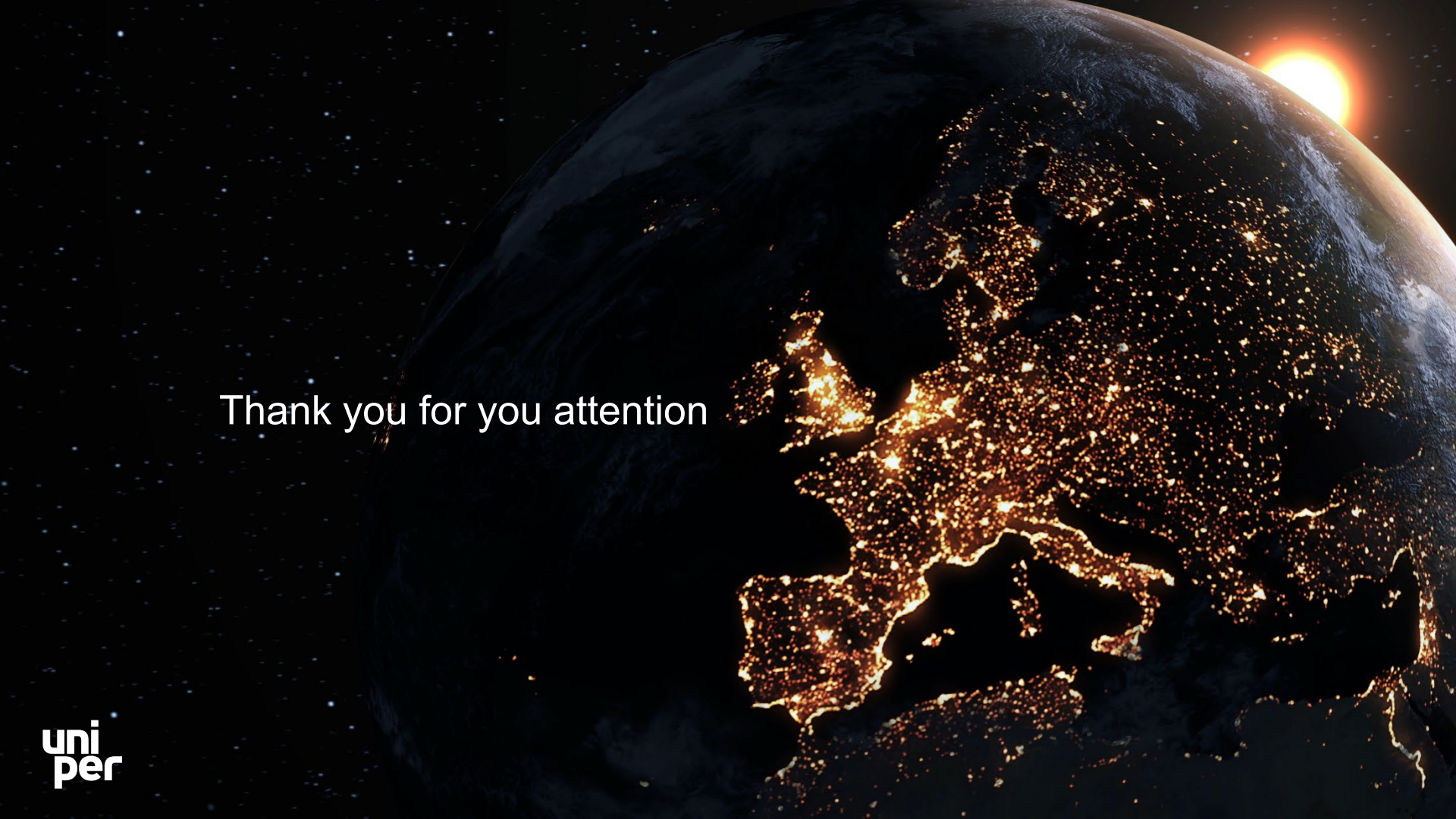
- Amended policies and legislation including a revised energi policy orientation bill
- Initiated a number of inquiries
- Appointed a nuclear new-build coordinator

# Summary

It is crucial to solve the energy issues to succeed as advanced industrial nations

A lot of nations are planning for a nuclear build-out, but we also need to take care of the already existing reactors and allow them to live a long and happy life in good health

The future looks promising


Thank you for you attention