

# Fortum concludes new nuclear feasibility study – continues to develop nuclear as a future option

FORTUM CORPORATION PRESS RELEASE 24 MARCH 2025 AT 9.00 EET

- Fortum believes that new nuclear can play an important role in a resilient and competitive low-carbon Nordic power system. We will continue to develop new nuclear as a long-term option to meet projected customer demand growth and with view to replacing existing assets at the end of their life-time.
- An economically viable new nuclear project requires visibility on growing customer demand, strong partnerships, and overall positive market outlook.
- A successfully executable new nuclear project requires use of proven technology, licensing and in-depth planning prior construction.
- During the next few years, Fortum will focus on further developing project economics and partnerships as well as continuing discussions with potential customers on how to best meet their needs. Fortum will also deepen its engagement with selected technology providers – EDF, GE-Hitachi and Westinghouse together with Hyundai – as well as continue the dialogue with regulators and political stakeholders.

Fortum has concluded its extensive feasibility study exploring the commercial, technological, and societal prerequisites for new nuclear in Finland and Sweden. The two-year study covered both small modular reactors (SMRs) and conventional large reactors, and involved in depth discussions with several technology vendors, potential partners and customers as well as societal stakeholders. Fortum will now continue to develop its capabilities to have new nuclear as an option to meet future customer demand in the Nordics in the longer term. In addition, Fortum sees the development work as a step in preparing for the eventual replacement of the existing nuclear capacity.

“Decarbonisation of industries and societies through electrification is expected to significantly increase, even double, power demand in the Nordics towards 2050. Meeting such a demand increase with intermittent renewables only could lead to a very volatile power system with limited predictability in terms of availability and price, which would not be desirable for our customers or society. We at Fortum believe it makes sense to keep all low-carbon production technologies in the toolbox also in the future and that’s why we will continue to develop our nuclear capabilities as a long-term option,” says **Markus Rauramo**, President and CEO of Fortum.

“In the next 5-10 years, new demand in the Nordics will be primarily met with new onshore wind and solar power coupled with flexibility and storage solutions as well as lifetime extensions of existing nuclear power plants. To prepare for the growing needs of our customers, we are developing a ready-to-build renewables pipeline, exploring pumped hydro, and extending the lifetime of our Loviisa plant. New nuclear could provide new supply to the Nordics earliest in the second half of the 2030s, if market and regulatory conditions are right,” he concludes.

**New nuclear requires visibility on income, a solid financing framework and technology-neutral treatment in regulation**

Most large industrial customers value a stable electricity supply profile and want to secure deliveries with long-term contracts, which nuclear power already today provides. Maintaining a balanced power mix brings also benefits to security of supply and stability for all customers and society. At the same time, the main risks of new nuclear projects relate to the long construction times, high capital requirements, and market price of electricity post commissioning.

A conclusion of Fortum's study is that with the current power market outlook, new nuclear is not economically viable on a merchant basis only. However, based on the analysis Fortum conducted and based on newbuild projects ongoing in other western countries, new nuclear projects can be manageable with a solid risk sharing framework – like the one being prepared by the Swedish government – when matched with increased customer demand.

“We have competitive advantage through our deep and broad expertise in nuclear power, but will need strong partners for future projects. As a next step, we will continue to develop a business case and actively pursue partnerships to test interest in co-developing and co-investing in a new nuclear newbuild project with us,” says **Petra Lundström**, Executive Vice President, Nuclear Generation at Fortum.

An important part of de-risking new nuclear is also regulatory harmonization and political stability beyond electoral cycles on both EU and national levels. Crucially, nuclear power should be treated on equal footing with other clean production technologies when it comes to financing and as raw material for low-carbon products such as hydrogen, fertilizers and clean steel. In addition, maintaining a sound operating environment for existing nuclear operations is essential for anyone considering future investments.

### **Fortum deepens collaboration with selected technology providers**

During the feasibility study, Fortum's nuclear experts spent thousands of hours evaluating different large and small modular reactor (SMR) designs together with vendors. Fortum will now continue to deepen the collaboration with two conventional reactor technology providers, EDF and Westinghouse-Hyundai, and one SMR developer, GE-Hitachi.

“From a project execution perspective, it is essential to ensure the maturity of the technology, limit the country-specific requirements and verify the vendor's competencies already in the pre-investment phase. Our plan is to collaborate with three plant suppliers to mitigate project risks before we would consider an investment. De-risking the licensing of a plant design as far as possible before construction is a must to reduce the likelihood of costly design changes, which can lead to delays in project execution,” says **Laurent Leveugle**, Vice President, New Nuclear at Fortum.

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Communications

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A webcast on the feasibility study's conclusions will be held today Monday 24 March at 9:00 EET. The webcast can be accessed at <http://fortum.videosync.fi/2025-03-24-newnuclearstudy>

To ask questions, please join the teleconference by registering using the following link <http://palvelu.flik.fi/teleconference/?id=5004995>. After the registration you will be provided with phone numbers and a conference ID to access the conference. To ask a question, please press \*5 on your telephone keypad to enter the queue. Questions can be asked in Finnish, English or Swedish.

A recording of the webcast will be published on Fortum's website.

### **Fortum's Nuclear Power Generation:**

Fortum is a leading nuclear power operator in Europe with over 45 years of experience in safe nuclear operations. In 2024, nuclear power constituted 52% of our low-carbon power generation, with a total nuclear output of 24.3 TWh. We fully own the Loviisa nuclear power plant in Finland and co-own plants in Olkiluoto, Finland, as well as Forsmark and Oskarshamn, Sweden, amounting to a combined capacity of 3.2 GW. Thanks to our 800 nuclear power professionals, we have strong in-house engineering and project competence enabling us to offer also services across the entire lifecycle of a nuclear power plant for our customers worldwide. As pioneers in responsible waste management, we operate our own final disposal facility for low- and intermediate-level radioactive waste in Loviisa and are co-owners of Posiva's Onkalo, the world's most advanced final disposal solution for used nuclear fuel. We believe that nuclear power will be needed in the future, and therefore we are developing new nuclear power as an option to meet the demand for low-carbon electricity required for decarbonization of societies and industries.

### **Fortum**

Fortum is a Nordic energy company. We generate and deliver reliable energy to our customers and the Nordic energy system while at the same time helping industries decarbonize their processes and grow. Our core operations comprise efficient and best-in-class low-carbon power generation, customer services, and heating and cooling. Fortum's power generation is already 99% from renewable or nuclear sources with one the lowest specific CO<sub>2</sub>-emissions in Europe. We are guided by our ambitious SBTi-validated emission reduction targets on our way towards net-zero by 2040. For our ~4,500 employees, we commit to be a safe and inspiring workplace. Fortum's share is listed on Nasdaq Helsinki. [fortum.com](https://www.fortum.com)