



# Fortum's nuclear power

Carbon dioxide-free nuclear power has an important role in mitigating climate change. Nuclear power is one of Fortum's central energy production forms.

In 2014, Fortum's nuclear power production was 23.8 TWh, i.e. 32% of our electricity production. In Finland, we own and operate the Loviisa power plant. We also have shares in Olkiluoto's two reactors and a share in the third reactor under construction. In Sweden, Fortum has shares in Forsmark's power production and in Oskarshamn's power production. Fortum's nuclear power production capacity totals 3,280 MW. In December 2014, Fortum announced that it is ready to take a max. 15% minority stake in Fennovoima's nuclear power project in Finland if the restructuring of TGC-1's hydropower production is realised in Russia.

Fortum has long experience in the responsible operation of nuclear power. Our nuclear power plants have a high level of safety, and we develop the safety and availability of the plants based on the principle of continuous improvement. The efficiency, power capacity and safety of both units at the Loviisa nuclear power plant have been increased over the years through plant modernisations; this work will continue in the coming years. Nuclear power upgrades are being carried out also in our co-owned plants in Sweden.

Fortum's nuclear power research and development activities concentrate on three areas: safe and efficient use of nuclear power, growing the nuclear power business, and new technologies in nuclear energy. The nuclear waste treatment and final disposal solutions at the Loviisa nuclear power plant and at Fortum's co-owned nuclear power plants are at the forefront of development globally.

Fortum also offers its diverse nuclear power expertise to other companies in the sector. Most of our products and services are based on innovative solutions developed by Fortum for the Loviisa power plant. For example, Fortum's Nures® solution developed for purification of radioactive liquids has been supplied to over 60 customers around the world since the 1990s; including Fukushima, Japan, to solve the wastewater problem.

## Fortum's nuclear power production capacity

### IN FINLAND

Loviisa 992 MW (ownership 100%)  
Olkiluoto 468 MW (share 27%)

### IN SWEDEN

Oskarshamn 1,089 MW (share 43%)  
Forsmark 720 MW (share 22%)

Total: 3,280 MW



## Overview of Fortum's nuclear fleet

### In Finland



**LOVIISA**

**OLKILUOTO**

Commercial operation started	Unit 1: 1977 Unit 2: 1981	Unit 1: 1978 Unit 2: 1980 Unit 3: (under construction)
Generation Capacity	Unit 1: 496 MW Unit 2: 496 MW	Unit 1: 880 MW Unit 2: 880 MW (Unit 3: 1,760 MW) Total: 1,760 MW (3,360)
Fortum's share		27% 468 MW
Yearly production	8 TWh	14 TWh
Fortum's share of production	8 TWh	4 TWh
Share of Fortum's Nordic production	18%	9%
Majority owner	Fortum	Pohjolan Voima
Fortum's share		26.6%
Operated by	Fortum	Teollisuuden Voima (TVO)

### In Sweden



**OSKARSHAMN**

**FORSMARK**

Commercial operation started	Unit 1: 1972 Unit 2: 1974 Unit 3: 1985	Unit 1: 1980 Unit 2: 1981 Unit 3: 1985
Generation Capacity	Unit 1: 473 MW Unit 2: 638 MW Unit 3: 1,400 MW Total: 2,511 MW	Unit 1: 984 MW Unit 2: 1,120 MW (Unit 3: 1,170 MW) Total: 3,274 MW
Fortum's share	43% 1,089 MW	22% 720 MW
Yearly production	17 TWh	25 TWh
Fortum's share of production	7 TWh	5.5 TWh
Share of Fortum's Nordic production	16%	13%
Majority owner	E.ON	Vattenfall
Fortum's share	43.4%	22.2%
Operated by	OKG Aktiebolag	Forsmarks Kraftgrupp