

Electricity imports from Russia to Finland

Frequently asked questions about Finland's interconnectors and electricity imports from Russia.

Is the power system of Finland dependent on electricity imports from Russia?

Finland is not dependent on electricity imports from Russia. Fingrid has preparations in place for the event that electricity trading with Russia suddenly stops. The security of the energy supply is not at risk, even if electricity trading with Russia stops.

Finland will become self-sufficient in electricity in 2023 or 2024 at the latest. Thanks to the Olkiluoto 3 nuclear power plant, which will be completed this year, and the increasing volume of wind power generation, Finland generates as much electricity on an annualised basis as it consumes. This change is a significant one, as until now, Finland has imported up to 20 per cent of the electricity consumed in the country.

What would happen if electricity imports from Russia to Finland stopped?

Importing electricity from Russia reduces the price of electricity in Finland and, indirectly, in the region, in Estonia and Sweden. If imports from Russia stopped, the price of electricity would probably rise in Finland, at least temporarily. If imports stopped, demand for electricity generated in Finland would rise, and it would be necessary to import more electricity from Sweden. The amount of electricity exported to Estonia could also decrease.

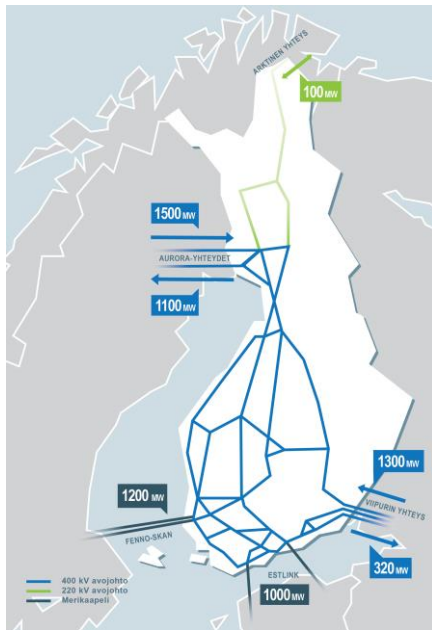
How does electricity trading between Finland and Russia work?

Electricity trading on the 400 kV interconnectors is operated by RAO Nordic Oy, a subsidiary of the Russian entity Inter RAO. The amount of electricity imported from Russia is affected by the prices of electricity in the Nordic and Russian electricity markets. Typically, if the price in the Nordic electricity market rises, more electricity is imported from Russia to Finland. Fingrid does not decide upon the amount of electricity imported commercially from Russia to Finland.

Russian electricity is sold to the wholesale market on the Nordic power exchange. The electricity then becomes part of the "mixed electricity" consumed in Finland.

Where does Finland import electricity from, and how much does it import?

The power system of Finland is a part of the joint Nordic electricity system and the European electricity markets. Finland has interconnectors to Sweden, Estonia, Norway, and Russia.



ARCTIC INTERCONNECTOR
 AURORA INTERCONNECTORS
 VYBORG INTERCONNECTOR
 overhead line
 Submarine cable

There are four interconnectors to **Sweden**. The Aurora interconnectors link Northern Finland and Sweden via two 400 kV AC connections. The import capacity of the northern interconnectors is currently 1,500 MW, and the export capacity is 1,100 MW. The import capacity will decrease to 1,200 MW as the commissioning of Olkiluoto 3 proceeds. The third Aurora interconnector between Northern Finland and Northern Sweden will be completed in 2025. There are two Fenno-Skan interconnectors to Central Sweden in the Rauma region. The Fenno-Skan DC connections have a total transmission capacity of 1,200 MW. In 2021, Finland imported approximately 15 TWh of electricity from Sweden, corresponding to approximately 17 per cent of consumption in 2021. Finland exported approximately 1 TWh of electricity to Sweden.

There is a 220 kV interconnector between **Norway** and Finland. It has a technical transmission capacity of around 100 MW. In commercial contexts, the interconnector is counted as part of the Aurora interconnection with Northern Sweden.

There are two Estlink DC connections between **Estonia** and Finland. The connections have a total transmission capacity of 1,000 MW. In 2021, the predominant electricity transmission direction in these interconnectors was from Finland to Estonia. A total of 6.7 TWh of electricity was exported to Estonia.

The interconnectors between **Russia** and Finland consist of three 400 kV transmission lines to the Vyborg DC substation and two 110 kV connections. The commercial import capacity of the Vyborg interconnectors totals 1,300 MW, and the export capacity is 320 MW. The 110 kV connections have a total transmission capacity of 160 MW. In 2021, a total of 9.1 TWh of electricity was imported to Finland from Russia, corresponding to approximately 10 per cent of Finland's electricity consumption. However, in 2020, imports from Russia accounted for just four per cent of Finland's electricity consumption. More electricity was imported to Finland from Russia last year than in the preceding year due to the substantially higher price of Nordic electricity.

Fingrid announced on 22 April that Fingrid will restrict the transmission capacity in the cross-border connections to Russia as of 1 am on 24 April 2022, with the effect that the import capacity in Fingrid's connections will be a maximum of 900 MW instead of the current 1,300 MW. The export capacity from Finland to Russia will remain unchanged (320 MW). The decision is based on an assessment of the risks to the power system in the changing international situation. [Link to the news 22.4.2022 >](#)

Why does Fingrid not stop importing electricity to Finland from Russia?

As a transmission system operator, Fingrid is responsible for transmitting electricity in accordance with the applicable legislation and agreements. The Energy Authority has confirmed the contract terms applying to the transmission of electricity. Discontinuing electricity imports is a political decision that should be made in Finland and in the EU more broadly. If such a decision is made, Fingrid has preparations in place for halting electricity transmission.

Fingrid charges a transmission tariff for electricity imported from Russia. However, the transmission of electricity from Russia to Finland is not a major business activity for Fingrid overall.