2023 GREEN BOND AND NOTES REPORT

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The electricity production capacity at Olkiluoto was nearly doubled when the Olkiluoto 3 (OL3) plant unit started regular electricity production in May 2023. This means that the low-emission nuclear electricity produced at Olkiluoto will play a significant role in the economic development, electricity self-sufficiency, and general well-being of all of Finland for decades to come.

Electricity in every weather

The electrification of society and phasing out of fossil fuels will require increasingly larger amounts of emission-free electricity even in the future. The role of low-carbon energy, such as renewable energy and nuclear power, is crucial in the mitigation of climate change. One benefit that nuclear power provides is stable production independent of the weather conditions, which supports the more weather dependent renewable energy production forms in the electricity system.

In Finland, 72 percent of greenhouse gas emissions are generated in energy production, energy consumption, and traffic. Thus, any emission reductions in the energy industry significantly impact the total emissions in Finland.

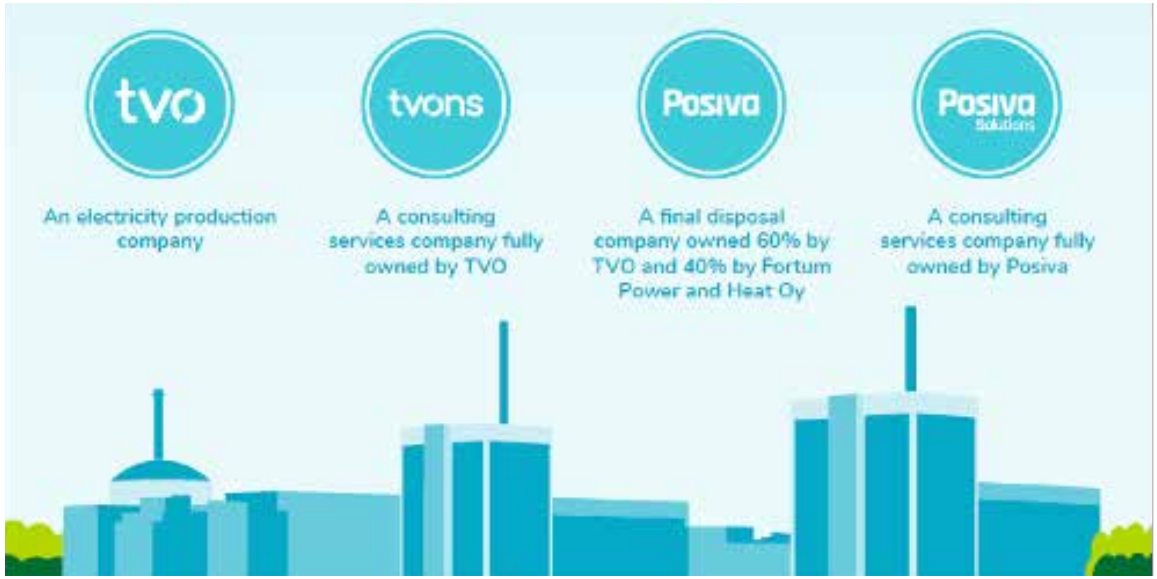
About TVO

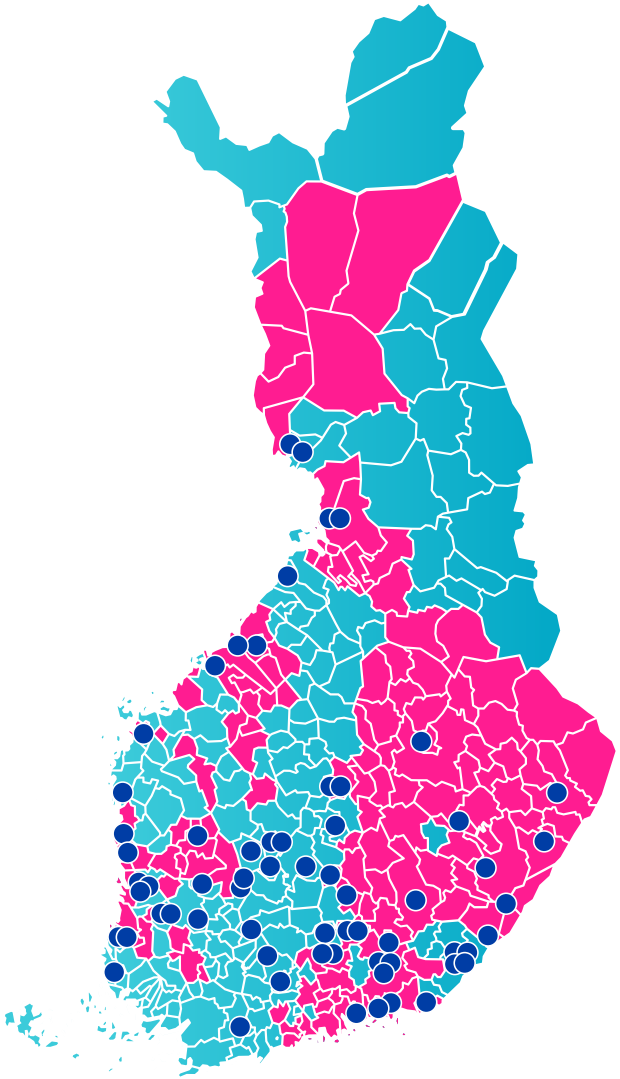
Teollisuuden Voima Oyj (TVO) is a non-listed public limited liability company owned by Finnish industrial and energy companies. TVO's line of business is construction and procurement of power plants and power transmission equipment, as well as production, supply, and transmission of electricity, primarily to its shareholders.

TVO operates according to the cost-price principle (Mankala principle). TVO is owned by five shareholders, some of which – like TVO – operate according to the cost-price principle. TVO's shareholders are Finnish industrial and energy companies, whose owners include 131 Finnish municipalities.

TVO produces climate-friendly nuclear power at three plant units operating at Olkiluoto in Eurajoki: Olkiluoto 1 (OL1), Olkiluoto 2 (OL2), and the newest addition, Olkiluoto 3 (OL3). With OL3 in operation, approximately 30 percent of Finland's electricity is produced at Olkiluoto.

Subsidiaries and joint ventures





The Finnish municipalities that are owners of TVO

The industrial sites of the owners

OL3 – Finland's greatest climate act

The Olkiluoto 3 (OL3) plant unit, has been taken into use in Olkiluoto. Regular electricity production at the OL3 plant unit, the single greatest climate act in Finland, started on 16 April 2023. With this third most powerful nuclear power unit in the world, approximately 30 per cent of Finland's electricity can be produced on one island, where the entire life cycle of nuclear power is managed.

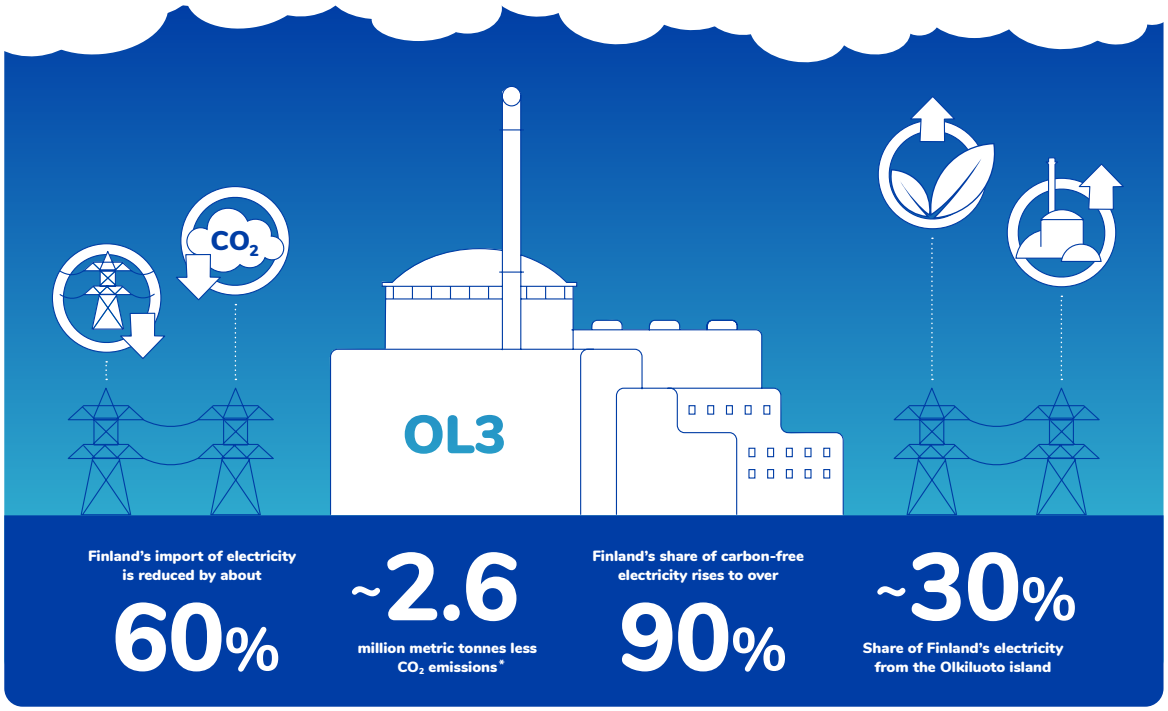
OL3 is an European Pressurized Water Reactor (EPR) plant unit with a net electrical output of approximately 1,600 MW. OL3 includes modern proven technology and advanced new safety features. Particular attention has been paid to factors that further increase the safety of the plant, such as the prevention and management of severe accidents, as well as to the efficiency, including cost-efficiency, of production.

Finland's greatest climate act

As a low-emission form of electricity production, nuclear power plays an important role in climate change mitigation. The regular electricity production of the OL3 plant unit enables significant leaps in advancing Finland's climate goals.

The Finnish New Climate Change Act came into force in July 2022. It sets emission reductions targets for 2030, 2040 and 2050. Now the target of a carbon-neutral Finland by 2035 has been laid down by law.

Compared to the EU-27 average of greenhouse gas emission intensity of electricity generation[1], the OL3 plant unit's production reduces annual CO_2 emissions by approximately 3.5 million metric tonnes. Simultaneously, Finland's self-sufficiency in clean electricity grows – the share of carbon-free electricity production rised to approximately 94 percent in 2023. The electricity production of the OL3 plant unit reduced the need to import electricity and the share of domestic production accounted for approximately 98 percent of total consumption.

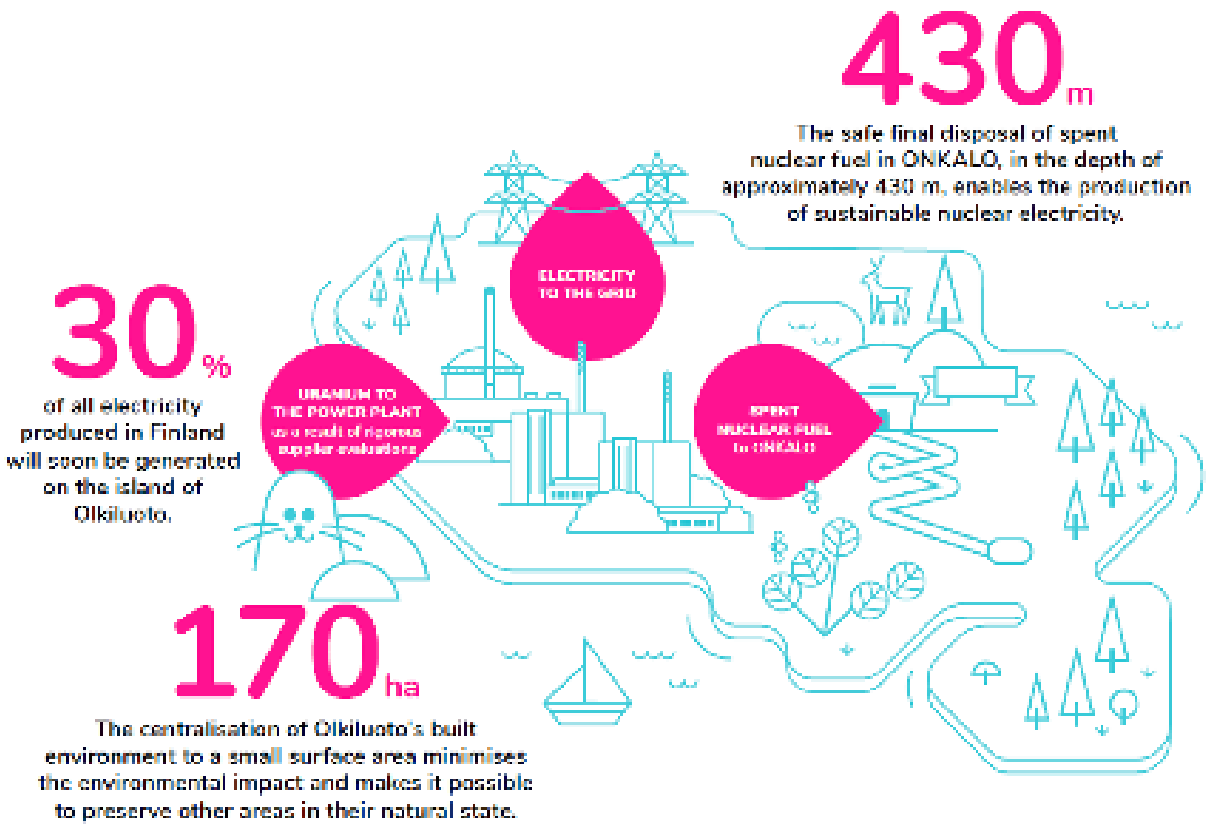


[1]Greenhouse gas emission intensity of electricity generation - European Environment Agency

*2023

The environmental impacts of nuclear power

The production of nuclear power generates low carbon dioxide emissions – over the entire lifecycle of nuclear power, its total emissions remain on the same level as wind power and hydropower. The long service life of nuclear power plants and their small land use requirements make them even more environmentally friendly.



Nuclear power causes some negative environmental effects as well, such as slight warming of the surrounding sea areas, minor releases into the air, water, and soil, as well as nuclear waste consisting of spent nuclear fuel.*

In particular, the final disposal of nuclear waste is a key question in the use of nuclear power. The TVO Group has a unique solution for the final disposal of nuclear waste that is even known all around the world: ONKALO (the name of the final disposal facility).

Nuclear power for a clean climate

According to IEA Net Zero by 2050 report, nuclear power is an important low-emission source of electricity, providing about 10% of global electricity generation. It can complement renewables in cutting power sector emissions while also contributing to electricity security as a dispatchable power source. It is also capable of producing low-emission heat and hydrogen. More efforts are needed to get nuclear power on track with the Net Zero Emissions by 2050 Scenario. Lifetime extensions of existing nuclear power plants are one of the most cost-effective sources of low-emission electricity, but further action is needed to take full advantage of these opportunities.

*Please read more from TVO's Environmental Report 2023.

Nuclear power has been a part of electricity supply for more than 50 years, and over that period has avoided around 66 Gt of CO2 emissions globally by reducing the need for coal, natural gas and oil. Without nuclear power, power sector CO2 emissions in advanced economies would have been 20% higher over the past 50 years, led by the United States and European Union.

The United Nations' COP28 climate summit was held in Dubai in the United Arab Emirates at the end of 2023. The summit's resolution calls for discontinuing the use of fossil fuels and replacing them with zero-emission or low-emission energy sources. The resolution aims at global climate neutrality by 2050 and lists technologies, such as nuclear power, whose production must be accelerated. This is the first time that nuclear power has been formally mentioned as one solution for the climate crisis in a COP resolution. 22 countries, Finland included, declared within the context of the COP conference that they will be tripling the production of nuclear energy by 2050 in order to achieve climate neutrality. The Net Zero Nuclear Industry Pledge states that the IAEA plays a key role in its member states including nuclear power in their national energy plans and that it is important to agree on financing for new nuclear power.

US Private Placement under the Green Bond Framework

On 15 December 2023, TVO issued a private placement of EUR 280 million of Green Notes. The arrangement consists of three bullet tranches: a 10-year Note (EUR 105 million), a 12-year Note (EUR 85 million) and a 15-year Note (EUR 90 million). The coupon rates for the Notes are 5.19%, 5.30% and 5.40%, respectively. The Notes do not have a public quotation and are unsecured.

The private placement is the first issuance under the Green Bond Framework established by TVO in the summer of 2023. As of 31.12.2023, EUR 280 million of the funds obtained from the issue have been 100% allocated to EU Taxonomy activity 4.27* and used 100% to refinance OL3 Nuclear Power Plant construction Capital Expenditure. Allocation of funds comply with the Green Bond Framework of TVO, based on environmentally friendly electricity production at the TVO's three nuclear power plant units in Olkiluoto, as well as on the responsible arrangement of nuclear waste management and Alignment of the Eligible Green Project Portfolio with the EU Taxonomy being 100%.

* Construction and safe operation of new nuclear power plants, for the generation of electricity or heat, including for hydrogen production, using best-available technologies.

Green Bond Proceeds allocation, as of 31.12.2023

TVO Green Bond Framework determines the evalution and selection process for Eligible Green Projects and the eligibility criteria are set out in the framework.

Nominal amount of outstanding Green Bonds and Notes	Issue Date	Maturity Date	EU Taxonomy activity	The amount of allocated proceeds, EUR million	Relative share of new financing versus refinancing	Descriptions of selected Eligible Green Projects financed	Alignment of the Eligible Green Project Portfolio with the EU Taxonomy
EUR 105 million	December 2023	December 2033	4.27	105	100% refinancing	OL3 Nuclear Power Plant construction Capital Expenditure	100%
EUR 85 million	December 2023	December 2035	4.27	85	100% refinancing	OL3 Nuclear Power Plant construction Capital Expenditure	100%
EUR 90 million	December 2023	December 2038	4.27	90	100% refinancing	OL3 Nuclear Power Plant construction Capital Expenditure	100%
Total				280			

Financial year 2023	Total EUR milloin	Taxonomy aligned %	Non-taxonomy eligible %
Turnover	876	99.6	0.4
Operating expenditure	177	100	0.0
Capital expenditure	461	100	0.0

Total balance 31.12.2023	EUR million
Outstanding Green Bond and Notes	280
Eligible Green Project Portfolio (4.27)	5,430

Based on the alignment assessments and KPI allocation in year 2023, 99.6% of the TVO Group's consolidated turnover is taxonomy-aligned and 100% of the taxonomy-relevant CapEx and OpEx is taxonomy-aligned.

Green Bond Impact Summary, as of 31.12.2023

	Annual GHG emissions avoided in tonnes of CO_2e	Annual low-carbon generation in MWh	Installed capacity impacted by investments in MW	OL3 Property, Plant and Equipment 31.12.2023 EUR million	Green notes allocated EUR million	Share of OL3 PP&E financed by Green Notes %
OL3 power plant unit	2,599,871	10,361	1,570	5,430	280	5.2
Impact of issued Green Notes	134,064					5.2

Project evaluation and selection process

The evaluation and selection process for Eligible Green Projects is a key component in ensuring that an amount equivalent to the Green Bond net proceeds is allocated to Eligible Green Projects under this Framework. To oversee this process, TVO has established a Green Bond Committee (GBC) comprising senior representatives from TVO's Finance, Sustainability and Treasury departments. The GBC will convene every 6 months or when otherwise considered necessary.

The evaluation and selection process is based on the following steps:

i. From existing and new investments, sustainability experts and representatives within TVO evaluate potential Eligible Green Projects' compliance with the Green Project category presented in this Framework. Based on the analysis, the experts can nominate investments as potential Eligible Green Projects.

ii. When potential Eligible Green Projects have been nominated, a list including their environmental and/or sustainability-related details will be reviewed by the GBC. The GBC is solely responsible for the decision to acknowledge the investment as eligible in line with the Framework. Eligible Green Projects will be tracked using an Eligible Green Project Portfolio. A decision to allocate net proceeds will require a consensus decision by the GBC, giving each committee member a veto power. Decisions made by the GBC will be documented and filed.

For the avoidance of doubt, the GBC holds the right to exclude any Eligible Green Project already funded by Green Bond net proceeds. If an Eligible Green Project is paid back or amortised, or for other reasons loses its eligibility, funds will follow the procedure under Management of Proceeds until reallocated to another Eligible Green Project.

Green Bond Committee members 2023 and 2024:

Jaana Isotalo HR, Training, Corporate Relations Communication and Development of Work Community Culture

Lauri Piekkari Senior Vice President, Treasury and Risk Management

Anja Ussa Senior Vice President Finance, Sustainability, IT, Business Development and Support Services