



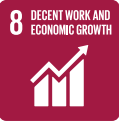
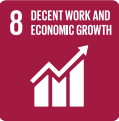
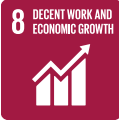



Sustainability Roadmap 2030

SDG	TARGET: CLIMATE-FRIENDLY ELECTRICITY FOR SOCIETY	ACTUAL RESULT 2022
   	Climate-friendly electricity production <ul style="list-style-type: none"> In 2022, OL3 is in commercial use, which enables the production of about 30% of Finland's electricity in Olkiluoto, as well as the avoidance of about 23 million metric tonnes of CO₂ emissions annually (compared with coal). 	<ul style="list-style-type: none"> OL3 was connected to the national grid and electricity production started on 12 March 2022. Commercial operation is to start in March 2023.
	Responsible nuclear waste management <ul style="list-style-type: none"> Posiva's final disposal activities begin according to plan in the mid-2020s. Final disposal is carried out on an industrial scale – about 400 tU spent fuel is disposed safely and according to cost estimates by 2030. 	<ul style="list-style-type: none"> The operating licence application for the final disposal facility was submitted to the Finnish Government in December 2021, and its processing has advanced according to plan. The progress of Posiva's project is described in more detail in the chapter "Final disposal of spent nuclear fuel" (p. 52–54).
	Emissions <ul style="list-style-type: none"> The TVO Group's operations are climate neutral by 2030. The thermal load of cooling water does not exceed 56.9 TWh annually. Radioactive emissions to air and water are kept clearly below authority limits (continual). 0 environmental accidents (in the serious/significant category) annually. 	<ul style="list-style-type: none"> The TVO Group's Scope 1 greenhouse gas emissions were 3,076 t CO₂eq. Scope 2 emissions were 65,635 t CO₂eq. The thermal load of cooling water was 31.1 TWh. Radioactive emissions were clearly below authority limits. There were 0 environmental accidents.
	Biodiversity <ul style="list-style-type: none"> Efficient land use: share of produced electricity with respect to the surface area of built environment ca. 15,647 GWh/km² from 2023 onwards. At least one voluntary project promoting biodiversity carried out annually. 	<ul style="list-style-type: none"> The amount of produced electricity with respect to the surface area of Olkiluoto's built environment was 9,618 GWh/km². Preparations were made during the year for establishing a new natural meadow at Olkiluoto in 2023.
	Circular economy <ul style="list-style-type: none"> Minimisation of waste volume and recycling waste as material, at least 55% annually by 2025 and 60% annually by 2030. 0 kg of landfill waste annually. 	<ul style="list-style-type: none"> Approximately 57% of waste was recycled as material. There was 0 kg of landfill waste.
	Energy efficiency <ul style="list-style-type: none"> Commitment to the goals set out in the Energy Efficiency Agreement period 2017–2025, as well as the goals of the following period. Goals are advanced by carrying out at least four location reviews and one plant measurement annually in Olkiluoto. 	<ul style="list-style-type: none"> Four location reviews were carried out, and plant measurements were performed at the OL1 and OL2 plant units after the annual outages.
SDG	TARGET: HIGH-CLASS SAFETY CULTURE	ACTUAL RESULT 2022
	Safety culture <ul style="list-style-type: none"> No deficiencies in IAEA's safety culture levels 1 and 2 (continual). 	<ul style="list-style-type: none"> One incident challenging the level of safety culture occurred relating to observed deficiencies in carrying out fire inspection rounds.
	Occupational health & safety <ul style="list-style-type: none"> No serious accidents in the TVO Group, including contractors (continual). The TVO Group's accident frequency (accidents per one million working hours) below 1, including contractors, by 2030. 	<ul style="list-style-type: none"> There were no serious accidents. The accident frequency was 4.8 accidents per one million working hours.
	Radiation protection <ul style="list-style-type: none"> Individual radiation doses incurred in Olkiluoto below half of authority limit (continual). 	<ul style="list-style-type: none"> The highest annual individual dose was 6.5 mSv. (authority limit: 20 mSv).
	Plant safety <ul style="list-style-type: none"> No events at INES 1 or higher (continual). 	<ul style="list-style-type: none"> There were two INES 1 events at the Olkiluoto power plant.

SDG	TARGET: ADDED ECONOMIC VALUE	ACTUAL RESULT 2022
	Customer-oriented & competitive activities <ul style="list-style-type: none"> The load factor of the Olkiluoto plant units is 90–95% as a rolling three-year average (continual). The rolling three-year production cost average is below 20 €/MWh in 2022. Calculating from OL3's first full production year, the rolling three-year average is below 30 €/MWh. Reported for the first time in 2026. 	<ul style="list-style-type: none"> The rolling three-year average of the load factor was 93.1% The rolling three-year average of the production cost was 19.91 €/MWh.
	Nuclear power as a desired production form <ul style="list-style-type: none"> Reputation index over 75 (excellent) in the stakeholder survey (continual). 	<ul style="list-style-type: none"> The reputation index in the latest stakeholder survey (2021) was 82 (excellent).
	Funds ready for final disposal <ul style="list-style-type: none"> The necessary funds for final disposal are secured through payments to the Finnish State Nuclear Waste Management Fund (continual). 	<ul style="list-style-type: none"> TVO's liability for nuclear waste management in the Finnish State Nuclear Waste Management Fund was EUR 1,839.6 million for the end of 2022.
SDG	TARGET: WELL-BEING OF EMPLOYEES & STRONG NETWORKS	ACTUAL RESULT 2022
	Occupational health <ul style="list-style-type: none"> Personnel survey (People Power Index) result at level AA (good) achieved by 2025. Sick leaves (% of working time) below 3% annually. Employees' pension insurance (TyEL) category below 4 (continual). 	<ul style="list-style-type: none"> In the latest personnel survey (2021), the People Power Index was at level A (satisfactory). TVO's sick leaves were 3.8% and Posiva's were 1.9%. The employees' pension insurance category was 2 for TVO and 1 for Posiva.
	High-class expertise <ul style="list-style-type: none"> Actualisation rate of competence surveying over 90% annually. Inspection rate of individual training plans over 90% annually. 	<ul style="list-style-type: none"> The actualisation rate of competence surveying was 76.4%. The inspection rate of individual training plans was 76%.
	Professional development <ul style="list-style-type: none"> Employees' changes in position over 10% annually. Actualisation rate of navigation discussions over 90% annually. 	<ul style="list-style-type: none"> 4.8% of the Group's permanent employees changed positions. The figure includes only actual changes in assignments within the Group. 99% of Group employees took part in at least one navigation discussion.
	Employer role <ul style="list-style-type: none"> Recruiting over 100 students for internships annually. 	<ul style="list-style-type: none"> The TVO Group employed a total of 107 trainees during the year.
	Responsible supply chain <ul style="list-style-type: none"> All suppliers of raw uranium and its conversion services are evaluated every 3–5 years depending on the supplier. 	<ul style="list-style-type: none"> Two supplier evaluations were carried out for suppliers of raw uranium and its conversion and enrichment stages. Evaluations were also carried out for a fuel manufacturer's two fuel factories, as well as four subcontractors of a fuel manufacturer.
	Stakeholder cooperation <ul style="list-style-type: none"> The most important stakeholders feel that the TVO Group's activities can be trusted, and that the Group communicates transparently on its operations. The indicators measuring experiences on trust and transparency are over 75, i.e. excellent, in the stakeholder survey (continual). 	<ul style="list-style-type: none"> Trust in the TVO Group's activities was 81 (excellent), and the view on communications was 72 (good) in the latest stakeholder survey (2021).
	Research & development <ul style="list-style-type: none"> R&D operations advance the safety, business activities, and future technological solutions of the plant units and final disposal of spent fuel with the help of networks and research projects (continual). 	<ul style="list-style-type: none"> The central R&D projects and cooperation partners are described in the chapter "Research and development" (p. 23–25).
Reliable use of the plant units <ul style="list-style-type: none"> 0 unplanned automatic scrams (continual). Annual unplanned energy unavailability factor <0.4% (1.5 days/year) of total production by 2024. 	<ul style="list-style-type: none"> There was one unplanned automatic scram. The unplanned energy unavailability factor was 1.0%. 	
Increasing final disposal expertise <ul style="list-style-type: none"> Posiva has the best knowledge and expertise in the final disposal of spent nuclear fuel, and it is the most desired international reference and valued partner (continual). 	<ul style="list-style-type: none"> Posiva's employees had 5.5 training days/employee. PSOY's turnover was EUR 2.95 million. 	
SDG	TARGET: TRAILBLAZER IN THE NUCLEAR INDUSTRY AND FINAL DISPOSAL	ACTUAL RESULT 2022
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