

Teollisuuden Voima Oyj's Interim Report 1 January–30 September 2024

During the first three quarters of 2024, Teollisuuden Voima's (TVO) electricity generation at the Olkiluoto 1 (OL1), Olkiluoto 2 (OL2) and Olkiluoto 3 (OL3) plant units continued safely. The total electricity production of the plant units during the period in review was 16,822 (17,622) GWh.

Electricity production at OL2 was suspended on 9 September 2024 due to an increase in humidity observed at the turbine plant's generator. The plant unit reconnected to the grid on 6 October 2024 following the replacement of the failed rotor. Electricity production at OL2 will initially continue at a lower power level of 725 MW, while the plant unit's full power output is 890 MW. Power has been limited in order to reduce the risk of rotor failure while the cause of the failure remains unclear. The power limitations are expected to last for several months, potentially until the next annual outage.

The scheduling of annual outages at the Olkiluoto power plant was modified in September 2024. The schedule estimates had been based on the duration of the planned work phases. The scheduling principles were now modified to also prepare for delays caused by unanticipated defect repairs based on earlier experience. The outage schedules for the Olkiluoto power plants have been announced until 2027.

The maximum production limitation of 1,570 MW set by the grid operator Fingrid Oyj (Fingrid) on OL3's production has been increased to 1,590 MW.

OL3's power has also been limited in situations where adequate grid load limitation capacity has not been available from Fingrid. Furthermore, output at all three Olkiluoto plant units has been reduced in situations where electricity generation has been high in the Nordic countries. Production from all three plant units substantially supports Finland's self-sufficiency in terms of electricity and helps in achieving the goals for carbon neutrality.

Since 1 September 2024, OL3 has been part of the down-regulation market of Fingrid's frequency restoration reserve. This market is used for balancing the electrical grid in situations of temporary excess electricity generation. The Olkiluoto nuclear power plant units have previously not been included in the regulation market. Tenders for participating in the down-regulation market are made by TVO on the owners' behalf.

An environmental impact assessment programme (EIA programme) concerning the possible service life extension and power uprating of the OL1 and OL2 plant units is under way and it is estimated to be completed during the latter part of the year.

In September 2024, TVO submitted to the Radiation and Nuclear Safety Authority (STUK) a special report concerning the brief exposure of four people to high radiation dose rates during a repair on hoist equipment at OL3 in June 2024. The exposure occurred during the lifting of a test fuel element. The exposure resulted in no personal injuries. The test operation of final disposal for spent nuclear fuel (joint functional test) started at Olkiluoto on 30 August 2024. The joint functional test involves testing the final disposal without spent nuclear fuel. During the test operation stage, equipment and systems of the disposal facility will be operated together for the first time, in accordance with the planned processes. The test operation ensures safe final disposal before the actual operations are started.

The processing of Posiva's operating licence application at STUK is progressing. STUK's safety assessment and statement concerning the operating licence application of the disposal facility for spent nuclear fuel is expected to be complete in the coming months.

Operating environment

The European Parliament confirmed the election of the German Ursula von der Leyen for a new five-year period as the President of the European Commission. At the same time, the Parliament approved von der Leyen's proposal on the Commission's political guidelines, or programme, for the following five years. The Commission aims to focus on strengthening the EU's industrial competitiveness and commits to its earlier target of a 90 per cent reduction in emissions by 2040. The political guidelines do not mention nuclear power directly, but they do state that the Commission intends to increase and prioritise investments in clean energy infrastructure and technologies, which include low-carbon technologies, for example. In her speech to the Parliament, Mrs von der Leyen described

her vision of a Europe that adheres to the targets for the European Green Deal in a technology neutral fashion.

Finland submitted an update of the National Energy and Climate Plan to the European Commission. The plan takes into account TVO's analyses regarding the service life extensions and power upratings of the OL1 and OL2 units. The share of nuclear power will be kept high. The aim is to increase the share of renewable energy to at least 62 per cent of the total final energy.

Financial performance

The parent company TVO operates on a cost-price principle (Mankala principle). The shareholders are charged incurred costs in the price of electricity and thus, in principle, the profit/loss for the period in review is zero, unless specific circumstances dictate otherwise. The shareholders pay variable costs based on the volumes of energy supplied and fixed costs in proportion to their ownership, regardless of whether they have used their share of the output or not. Because of this operating principle, key indicators based on financial performance will not be presented.

The Group's turnover during the period in review, 1 January – 30 September 2024, was EUR 701 (1 January – 30 September 2023: 587) million. The higher turnover compared to the previous year is due to OL3's electricity production. The commercial operation of OL3 started in May 2023 and the charging of the fixed fees to the shareholders started then. The amount of electricity delivered to shareholders was 16,794 (17,595) GWh. The lower delivery of electricity compared to the previous year was affected by the annual outages, which were longer than planned, and the generator failure at OL2.

The consolidated profit/loss was EUR 62 (67) million.

Financing and liquidity

TVO's financial situation has developed as planned.

TVO's liabilities (non-current and current) at the end of the period in review, excluding the loan from the Finnish State Nuclear Waste Management Fund re-lent to shareholders, amounted to EUR 5,497 (31 December 2023: 5,539) million, of which EUR 929 (929) million were subordinated shareholder loans. During the period in review, the company raised a total of EUR 600 (894) million in new non-current liabilities, while repayments amounted to EUR 636 (931) million.

TVO has a revolving credit facility of EUR 1,000 million, which was extended by one year until 2027 in June 2024. From 2026 until 2027, the amount of the revolving credit facility will be approximately EUR 890 million.

TVO published its first Green Bond report on 6 September 2024. The report explains what the funds from the EUR 280 million in directed Green Notes (US Private Placement) issued in December 2023 were used towards and what the estimated environmental impacts of these objects are.

Fitch, Moody's and Standard & Poor's have confirmed TVO's credit rating to the current levels (Fitch BBB-, Moody's Baa3, Standard & Poor's BBB-) and kept TVO's future outlook stable. TVO also has a longstanding A+ credit rating from the Japan Credit Rating Agency (JCR), with a stable outlook.

In May, TVO issued a seven-year green bond of EUR 600 million within the framework of TVO's bond programme (EMTN). The funds obtained from the issued bond will be used for purposes pursuant to the Green Bond Framework published in June 2023 or their refinancing.

In connection with the issue, TVO made an invitation to the holders of its outstanding EUR 500 million bond, due in February 2025, to tender their Notes for purchase by TVO for cash. The amount of the tenders was EUR 260 million which TVO approved in full.

TVO uses its right to borrow funds back from the Finnish State Nuclear Waste Management Fund within the framework of legal regulations. On 30 September 2024, the amount of the loan was EUR 728 (31 December 2023: 728) million and it has been re-lent to TVO's shareholders. The loan from the Finnish State Nuclear Waste Management Fund remained unchanged during the reporting period.

Electricity production

The electricity production of the Olkiluoto nuclear power plant units (OL1, OL2 and OL3) during the period in review was 16,822 (17,622) GWh). The total load factor for the plant units was 76.4 per cent.

During the period under review, all three plant units operated safely. The net production for OL1 was 4,985 (5,486) GWh, the load factor* was 85.3 (94.3) per cent and the availability factor** was 85.4 per cent. The net production for OL2 was 5,091 (4,903) GWh, the load factor* was 87.2 (84.3) per cent and the availability factor** was 87.3 per cent. The net production for OL3 was 6,747 (7,233) GWh, the load factor* was 65.5 (68.4) per cent and the availability factor** was 70.0 per cent.

Annual outages

The first annual outage for OL3 started on 2 March 2024. The annual outage had an estimated duration of 37 days and an actual length of 74 days. The outage was originally planned to end on 8 April; however, OL3 returned to electricity production on 16 May. The plant unit's ramp-down, preparation for refuelling, foreign material inspections on the fuel, defect repairs and technical problems with inspection equipment took more time than had been planned.

The refuelling outage for OL2 started on 28 April, and it had a planned duration of approximately 8 days. The original schedule was extended by slightly more than three days due to technical defects that arose during the installation of the reactor pressure vessel lid and the ramp-up of the plant. OL2 returned to electricity production on 9 May.

The service outage for OL1 began on 12 May and had a planned duration of approximately 16 days. The plant unit's annual outage was extended due to a defect observed at the generator, and it ended on 19 June after the defect had been repaired.

Significant events at the plant units

Electricity production at OL2 was suspended on 9 September 2024 due to an increase in humidity observed at the turbine plant's generator. The plant unit reconnected to the grid on 6 October 2024 following the replacement of the failed rotor. Power has been limited to 725 MW in order to reduce the risk of rotor failure. Four people were briefly exposed to high radiation dose rates during a repair on hoist equipment at OL3 in June 2024. The exposure occurred during the lifting of a test fuel element. The exposure was so minor that no personal injuries resulted from the event. According to the international INES classification system, TVO classified the severity of the event as 1. STUK will determine the final INES level during the processing of the special report. Even though the estimated basic rating for the event is 0, TVO uprated the event by one since shortcomings have been identified in the management of a radioactive component.

Olkiluoto 3

OL3 was procured as a fixed-price turnkey project from a consortium (Plant Supplier) formed by Areva GmbH, Areva NP SAS and Siemens AG. TVO confirmed the provisional takeover of the plant unit for the warranty period in April 2023, when TVO submitted the Provisional Takeover Certificate to the OL3 Plant Supplier. The final takeover of the plant unit will take place after the conclusion of the two-year warranty period. Even after this, the Plant Supplier's liabilities under the warranty will remain in force up to a maximum of eight (8) years to a certain extent.

* The load factor indicates the energy generated by a plant unit during the period in review as a percentage of the total energy that it would have generated by operating without interruption at full power. The load factor is decreased by power reductions caused by Fingrid's grid load limitation (OL3) or other grid restrictions, energy generation losses due to low electricity demand and energy generation losses due to annual outages, defects or operational occurrences at the plant unit.

"The availability factor indicates the energy that could have been generated by a plant unit during the period in review as a percentage of the total energy that it would have generated by operating without interruption at full power. The availability factor is decreased by energy generation losses due to annual outages, defects or operational occurrences at the plant unit. A Global Settlement Agreement (GSA) was signed in March 2018 and amended in June 2021 concerning the completion of the OL3 project and related disputes. During the period in review, the fund established in accordance with the GSA and funded by the Areva companies has been used to cover costs incurred to the Areva companies for the completion of the OL3 project in accordance with the GSA.

Current receivables include the additional delay compensation of EUR 56.7 million to TVO from the plant supplier, agreed upon in 2021, which will become due during the final takeover of OL3 in April 2025 at the earliest.

In September 2024, an agreement was signed with the plant supplier related to the net power output of the OL3 plant unit; on the basis of this agreement, the plant supplier will pay EUR 14 million to TVO in connection with the final takeover of the plant unit.

Nuclear fuel

During the period in review, nuclear fuel purchases amounted to EUR 102 (53) million and the amount consumed to EUR 87 (79) million. The nuclear fuel and uranium stock carrying value on 30 September 2024 was EUR 491 (31 December 2023: 476) million.

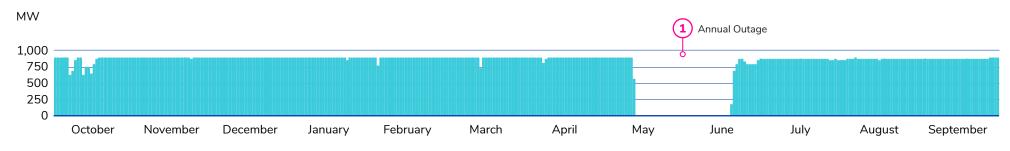
Nuclear waste management

Under the Finnish Nuclear Energy Act, TVO is responsible for the measures related to nuclear waste management and the related costs.

The liabilities in the consolidated financial statement show a provision related to nuclear waste management liability of EUR 1,297 (31 December

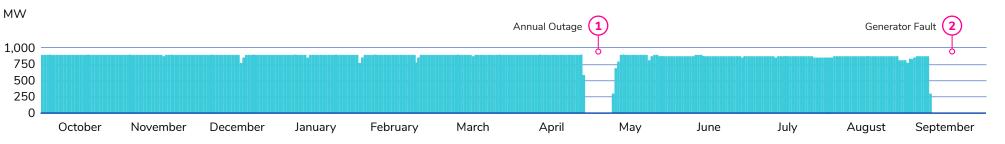
OL1 Production

Average output 1 October 2023–30 September 2024

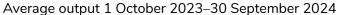


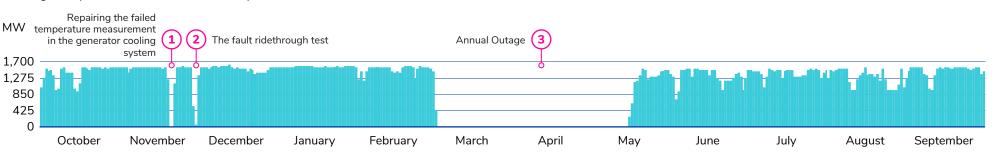
OL2 Production

Average output 1 October 2023–30 September 2024



OL3 Production





2023: 1,289) million, calculated according to the international IFRS accounting principles. TVO's share in the Finnish State Nuclear Waste Management Fund, EUR 1,046 (31 December 2023: 1,035) million, is presented under assets in accordance with the IFRIC 5 interpretation. The total cost estimate based on a nuclear waste management technical plan and schedule was last updated in June 2022.

In order to cover the future costs of nuclear waste management, TVO makes contributions to the Finnish State Nuclear Waste Management Fund in accordance with the Finnish Nuclear Energy Act. In December 2023, the Ministry of Economic Affairs and Employment (MEAE) set TVO's liability for nuclear waste management at EUR 1,918 (1,840) million for the end of 2023 and the Company's funding target in the Finnish State Nuclear Waste Management Fund for 2023 at EUR 1,525 (1,458) million. In addition, the MEAE has decided that the liability for 2024 is EUR 1,929 million, of which EUR 1,484 million belong to OL1/OL2 and EUR 445 million belong to OL3.

In March 2024, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee for 2023 at EUR 29 million, which TVO paid in March 2024. The return from the investment activities of the Finnish State Nuclear Waste Management Fund in 2023 was positive and, as a result, a part of the investment returns for 2023 was allocated as security for the statutory protected portion and the surplus reduced TVO's nuclear waste management fee for 2023. Therefore, the cash security of approximately EUR 44 million for the protected portion that was submitted to the Fund in 2023 was returned to TVO in March 2024. The nuclear waste management fee for 2024 will be confirmed in March 2025.

Final disposal of spent nuclear fuel

Posiva Oy is responsible for the final disposal of spent nuclear fuel generated at the power plants of its owners, TVO at Olkiluoto and Fortum Power and Heat Oy (Fortum) in Loviisa.

The processing of Posiva's operating licence application at STUK is progressing. STUK's safety assessment and statement concerning the operating licence application of the disposal facility for spent nuclear fuel is expected to be complete in the coming months. Work related to the installation and commissioning of the encapsulation plant and underground production equipment has progressed in a manner where the joint functional test was started on 30 August 2024 with the assembly of a canister and the transfer of the test transfer container. The final disposal of spent nuclear fuel is to start at Olkiluoto in the mid-2020s.

Acquisitions of tangible and intangible assets and shares

The TVO Group's investments during the period in review amounted to EUR 52 (414) million. The parent company's investments amounted to EUR 49 (424) million. Based on the agreement signed in September 2024, the plant supplier will pay TVO EUR 14 million in connection with the final takeover of OL3. This sum will reduce the acquisition cost of the OL3 project. During the period in review for 2023, EUR 370 million of the parent company's investments targeted the OL3 project.

In the summer of 2021, Hitachi Energy (Hitachi) and TVO signed a contract on the turn-key delivery of one of Europe's largest battery energy storage systems (BESS) to Olkiluoto. For its part, the 90-megawatt BESS will support the entire energy system in case of a possible production disturbance at OL3, thereby reducing the effects of power changes on the national grid as part of Fingrid's grid load limitation. The battery energy storage system is still in the commissioning phase due to defects and shortcomings observed in it. According to the latest schedule provided by Hitachi, work will continue at least until February 2025.

Pending court cases and disputes

TVO is party to an arbitration procedure related to the condenser replacement at OL1 and OL2 that was carried out in 2017 and 2018. The counterparty to the arbitration is Balcke-Dürr GmbH. TVO considers the claims presented by the counterparty in the arbitration to be unfounded, and demands that they be rejected and that TVO's legal expenses be compensated for.

In January 2024, the Finnish Energy Authority issued a decision concerning the grid load limitation that is related to full power operation at OL3. According to the enforceable decision, grid load limitation is the grid operator's special protection system that belongs under the responsibility of the transmission system operator Fingrid. In its decision, the Energy Authority considers that Fingrid has transferred its obligations related to the grid load limitation system to TVO without justification. In February 2024, both TVO and Fingrid filed appeals with the Market Court regarding the Energy Authority's decision. Fingrid urgently demanded that the Market Court suspend the enforcement of the Energy Authority's decision in February 2024 and again in May 2024. The Market Court rejected Fingrid's demand on both occasions. The Energy Authority required that Fingrid submit a

proposal regarding covering the costs of the grid load limitation to the Energy Authority for confirmation by the end of April 2024. In early April 2024, Fingrid launched a stakeholder hearing regarding the terms related to the OL3 grid load limitation and the grounds for determining the fees that it was preparing. Following the stakeholder hearing, Fingrid submitted the terms and the grounds for determining the fees to the Energy Authority for confirmation at the end of April. TVO also participated in the stakeholder hearing and published its own statement on its website. Until now, TVO has paid the majority of the costs incurred from maintaining the grid load limitation.

At the end of the period in review, TVO had no other pending court cases or disputes.

Personnel

The total number of personnel in the Group at the end of the period in review was 1,083 (31 December 2023: 1,045, 30 September 2023: 1,042). The number of permanent employees in the Group at the end of the period in review was 1,041 (31 December 2023: 1,009, 30 September 2023: 1,010).

Annual General Meeting

TVO's Annual General Meeting on 22 March 2024 approved the financial statements for 2023 and discharged the members of the Board of Directors and the President and CEO from liability. All of the members of the Board were re-elected. At its organisation meeting, the Board elected **Petra Lundström** as Chair of the Board and **Ilkka Tykkyläinen** as Vice-Chair. The Board also chose from among its members the members and chairs of the Board Committees. The Annual General Meeting decided to elect PricewaterhouseCoopers Oy, an audit firm chartered by the Central Chamber of Commerce, as the Company's Auditor and the assurer of the Sustainability Report.

Auditing

The Interim Report is unaudited.

Risks and uncertainty factors in the near future

The major risks and uncertainty factors in TVO's operations have been presented in the 2023 Report of the Board of Directors.

The rotor installed at OL2 in September–October was the final spare rotor in TVO's inventory. The rotor at OL2 also failed one year ago and was replaced. The risk of rotor failure still exists, but it has been reduced with the power limitation (725 MW) as a result of conservative analyses; the cause of the defect remains unclear. The power limitations are expected to last for several months, potentially until the next annual outage.

Uncertainties related to the availability of the OL3 plant unit still remain during its first operating cycles. These uncertainties are managed by means of systematic maintenance and monitoring of the plant unit. If OL3 fails to achieve the planned load factor or operating cost structure, the Finnish national grid limits its power level or the costs incurred by TVO due to grid load limitation make it not profitable to operate the plant unit at full power, there is a risk of generation costs exceeding the target. The arrangement for the OL3 grid system protection exceeding the 1,300 MW power output has not yet been organized by the transmission system operator Fingrid for the year 2025. According to the Electricity Market Act and the decision made by the Finnish Energy Authority, the responsibility for organizing and implementing the grid system protection lies with the transmission system operator, just like all other grid protection systems. If Fingrid does not take care of the grid system protection it is responsible for, there is a risk that Fingrid limits OL3's production to at most 1,300 MW from January 1, 2025.

Supplier options related to the manufacturability and inspectability of Posiva's final disposal canister have been expanded in order to manage uncertainties.

In September 2023, STUK reported that the safety assessment and statement on the operating licence application for the disposal facility for spent nuclear fuel has been postponed until the end of 2024. This will, for its part, delay the processing of the operating licence application by the Government which may, in turn, delay the starting of final disposal for spent nuclear fuel. Furthermore, Posiva needs to supplement additional clarifications related to the safety assessment during the latter part of the year.

Following the amendment to the Nuclear Energy Act, the Finnish State Nuclear Waste Management Fund has started investment activities in 2022, as a result of which the Fund's investments are valued at market value which, in turn, affects the amount of TVO's share in the Fund. This may lead to uncertainty, specifically with regards to the amount of TVO's nuclear waste management fee.

Assessment of year-end developments

During the current financial period, electricity production will otherwise continue as normal but power output at OL2 has been limited to 725 MW in order to reduce the risk of rotor failure. The risk is described in more detail in the paragraph "Risks and uncertainty factors in the near future".

Nuclear fuel availability is guaranteed by long-term agreements.

TVO is closely monitoring the fulfillment of the conditions of the Settlement Agreement signed with OL3's Plant Supplier. This agreement signed in March 2018 and amended in June 2021 contains conditions which continue until the end of the warranty periods. TVO is preparing for the final takeover of OL3, which will occur in April 2025 at the earliest.

Posiva's joint functional test will continue for several months, first at the encapsulation plant and later in the underground facilities.

Events after the period under review

OL2 returned to electricity production on October 6th.

18 October 2024

Teollisuuden Voima Oyj Board of Directors

Key Figures of TVO Group

TVO Group (IFRS) (M€)	Q1–Q3 2024	Q1–Q3 2023	Q1-Q4 2023
Turnover	701	587	876
Profit/loss for the period	62	67	164
Depreciation	187	116	179
Investments 1)	52	414	461
Equity	2,244	2,241	2,252
Subordinated shareholder loans (hybrid equity) (included in the former) ³⁾	929	929	929
Non-current and current interest-bearing liabilities (excluding loan from VYR) $^{\mbox{\tiny 2J}}$	4,635	4,795	4,676
Loan from VYR ²⁾	728	728	728
Provision related to nuclear waste management	1,297	1,249	1,289
Balance sheet total	9,173	9,291	9,229
Equity ratio % 4)	31.4	30.6	31.2
Average number of personnel	1,099	1,060	1,057

¹⁾ Acquisitions of property, plant and equipment, intangible assets and shares are based on gross investments.

²⁾ The Finnish State Nuclear Waste Management Fund (VYR).

³⁾ Subordinated loans. The loans of the equity holders of the Company are included in equity according to the IFRS standards.

⁴⁾ Equity ratio $\% = 100 \times equity$

balance sheet total - provision related to nuclear waste management - loan from the Finnish State Nuclear Waste Management Fund

Key Figures of Teollisuuden Voima Oyj

Teollisuuden	Voima	Ovi	(FAS)	(M€)	
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The parent company's interim financial statement has been made in accordance with the Finnish Accounting Standards (FAS).	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Turnover	699	584	873
Profit/loss before appropriations	28	52	118
Fuel costs	87	79	111
Nuclear waste management costs	16	99	106
Capital expenditure (depreciation and financial income and expenses)	284	170	266
Investments ¹⁾	49	424	449
Equity	864	864	864
Appropriations	328	234	299
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) ²⁾	4,567	4,758	4,610
Loans from equity holders of the company ³⁾	929	929	929
Loan from VYR ²⁾	728	728	728
Balance sheet total	7,685	7,792	7,714
Equity ratio % 4)	30.5	28.7	30.0
Average number of personnel	1,096	1,058	1,055

¹⁾ Acquisitions of tangible and intangible assets and shares are based on gross investments.

²⁾ The Finnish State Nuclear Waste Management Fund (VYR).

³⁾ Subordinated loans.

⁴⁾ Equity ratio $\% = 100 \times \text{equity} + \text{appropriations} + \text{loans from equity holders of the company}$

balance sheet total - Ioan from the Finnish State Nuclear Waste Management Fund

Electricity delivered to equity holders of the company (GWh)	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Nuclear power	16,794	17,595	24,633
Total	16,794	17,595	24,633

Consolidated financial statement in brief and notes

Consolidated Income Statement

EUR 1,000	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Turnover	700,849	587,041	876,204
Work performed for own purposes	0	7,143	7,143
Other income	9,506	8,131	11,904
Materials and services	-148,157	-171,424	-222,211
Personnel expenses	-67,208	-61,551	-84,430
Depreciation and impairment charges	-186,765	-116,247	-178,674
Other expenses	-188,047	-109,233	-160,119
Operating profit/loss	120,178	143,860	249,817
Finance income	77,655	26,402	76,445
Finance expenses	-135,255	-103,502	-162,423
Total finance income and expenses	-57,600	-77,100	-85,978
Share of the profit/loss of joint ventures	-145	104	173
Profit/loss before income tax	62,433	66,864	164,012
Income taxes	0	-10	-13
Profit/loss for the period	62,433	66,854	163,999
Profit/loss for the period attributable to:			
Equity holders of the company	62,433	66,854	163,999

Consolidated Statement of Comprehensive Income

EUR 1,000	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Profit/loss for the period	62,433	66,854	163,999
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges	-35,659	-15,682	-89,928
Total other comprehensive profit/loss items for the period	-35,659	-15,682	-89,928
Total comprehensive profit/loss for the period	26,774	51,172	74,071
Total comprehensive profit/loss for the period attributable to:			
Equity holders of the company	26,774	51,172	74,071

Consolidated Statement of Financial Position

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Assets			
Non-current assets			
Property, plant and equipment	6,222,203	6,364,680	6,357,069
Intangible assets	2,530	2,356	2,515
Loans and other receivables	728,034	787,123	784,734
Investments in joint ventures	3,925	4,001	4,070
Investments in shares	1,692	1,692	1,692
Derivative financial instruments	135,083	213,715	169,076
Share in the Finnish State Nuclear Waste Management Fund	1,046,104	1,001,904	1,035,276
Total non-current assets	8,139,571	8,375,471	8,354,432
Current assets			
Inventories	502,066	502,003	486,932
Trade and other receivables	159,963	95,738	95,973
Derivative financial instruments	6,065	4,946	3,555
Cash and cash equivalents	365,802	313,024	287,684
Total current assets	1,033,896	915,711	874,144
Total assets	9,173,467	9,291,182	9,228,576

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Equity and liabilities			
Capital and reserves attributable to equity holders of the company			
Share capital	600,365	600,365	600,365
Share premium reserve and statutory reserve	242,383	242,383	242,383
Fair value and other reserves	103,139	213,045	138,799
Subordinated shareholder loans (hybrid equity)	929,300	929,300	929,300
Retained earnings	368,855	255,614	341,113
Total equity	2,244,042	2,240,707	2,251,960
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	1,297,376	1,248,852	1,289,352
Loan from the Finnish State Nuclear Waste Management Fund	727,500	727,500	727,500
Bonds	3,567,034	3,508,892	3,458,390
Other financial liabilities	350,915	952,401	819,905
Derivative financial instruments	13,021	34,212	19,859
Total non-current liabilities	5,955,846	6,471,857	6,315,006
Current liabilities			
Current financial liabilities	697,432	294,595	371,387
Derivative financial instruments	6,539	4,918	6,708
Advance payments received	68,058	69,819	68,063
Trade payables	19,387	25,192	22,793
Other current liabilities	182,163	184,094	192,659
Total current liabilities	973,579	578,618	661,610
Total liabilities	6,929,425	7,050,475	6,976,616
Total equity and liabilities	9,173,467	9,291,182	9,228,576

Consolidated Statement of Changes in Equity

EUR 1,000	Share capital	Share premium reserve and statutory reserve	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2024	600,365	242,383	138,799	929,300	341,113	2,251,960	2,251,960
Profit/loss for the period	0	0	0	0	62,433	62,433	62,433
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	-35,660	0	0	-35,660	-35,660
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-34,691	-34,691	-34,691
Equity 30 Sep 2024	600,365	242,383	103,139	929,300	368,855	2,244,042	2,244,042

EUR 1,000	Share capital	Share premium reserve and statutory reserve	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2023	600,365	242,383	228,727	929,300	216,742	2,217,517	2,217,517
Profit/loss for the period	0	0	0	0	66,854	66,854	66,854
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	-15,682	0	0	-15,682	-15,682
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-27,982	-27,982	-27,982
Equity 30 Sep 2023	600,365	242,383	213,045	929,300	255,614	2,240,707	2,240,707

EUR 1,000	Share capital	Share premium reserve and statutory reserve	Fair value and other reserves	Subordinated shareholder Ioans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2023	600,365	242,383	228,727	929,300	216,742	2,217,517	2,217,517
Profit/loss for the financial year	0	0	0	0	163,999	163,999	163,999
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	-89,928	0	0	-89,928	-89,928
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-39,628	-39,628	-39,628
Equity 31 Dec 2023	600,365	242,383	138,799	929,300	341,113	2,251,960	2,251,960

Consolidated Statement of Cash Flows

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Operating activities			
Profit/loss for the period	62,433	66,854	163,999
Adjustments:			
Taxes	0	11	13
Finance income and expenses	57,600	77,100	85,978
Depreciation and impairment charges	186,765	116,247	178,674
Share of the profit/loss of joint ventures	145	-104	-173
Other non-cash flow income and expenses 1)	7,499	-35,347	-42,303
Sales profit/loss of property, plant and equipment and shares	-20	0	24
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	6,188	150,655	-34,838
Increase (-) or decrease (+) in inventories	-15,134	20,299	35,319
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	-8,651	100,926	93,986
Interest paid and other finance expenses	-112,080	-49,837	-63,464
Interest received	33,132	13,000	17,041
Taxes paid	0	-11	-13
Cash flow from operating activities	217,877	459,793	434,243

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Investing activities			
Acquisition of property, plant and equipment	-65,242	-437,732	-273,515
Proceeds from sale of property, plant and equipment	34	24	0
Acquisition of intangible assets	-539	-352	-541
Proceeds from sale of shares	0	220	220
Loan receivables granted	0	-76,160	-73,772
Cash flow from investing activities	-65,747	-514,000	-347,608
Financing activities			
Withdrawals of long-term loans	600,000	970,408	1,250,408
Repayment of long-term loans	-636,365	-931,114	-1,352,230
Principal elements of lease payments	-2,999	-3,154	-3,799
Interest paid of subordinated shareholder loans (hybrid equity)	-28,678	-18,992	-36,393
Increase (+) or decrease (-) in current financial liabilities	4,340	89,020	89,020
Repayment of current financial liabilities	-10,310	-92,140	-99,160
Cash flow from financing activities	-74,012	14,028	-152,154
Change in cash and cash equivalents	78,118	-40,179	-65,519
Cash and cash equivalents at the beginning of period	287,684	353,203	353,203
Cash and cash equivalents at the end of period	365,802	313,024	287,684

¹⁾ Other non-cash flow income and expenses consists of nuclear waste management obligation.

Notes to the Interim Report

Accounting policies

The interim financial statements have been prepared in accordance with the IAS 34 Interim Financial Reporting Standard. The accounting policies adopted are otherwise consistent with those of the Group's annual financial statements for the year ended on 31 December 2023. Additionally, the changes according to the revised IAS/IFRS standards have been adopted.

The commercial operation for Olkiluoto 3 plant unit (OL3) started on 1 May 2023. Changes to the accounting policies related to the commercial operation are presented under the heading The completion of Olkiluoto 3 effects on the comparability of the consolidated income statement and balance sheet.

Management's critical accounting estimates and assumptions

The preparation of the Interim Report requires the management to make estimates and assumptions that affect the reported amounts of assets and liabilities, income and expenses. The actual results may differ from these estimates. Significant assumptions made by the management in applying the Group's accounting policies and crucial uncertainties were the same as the ones applied to the annual financial statements as for the year ended on 31 December 2023.

The completion of Olkiluoto 3 effects on the comparability of the consolidated income statement and balance sheet

The electricity production of the OL3 plant unit started on 12 March 2022. Sales proceeds from the delivery of OL3's test production electricity and variable costs have been recorded in the income statement in accordance with the IAS 16 Standard up to 30 April 2023. Regular electricity production for OL3 started in April 2023 and commercial operation started in May 2023.

All realised costs of the OL3 project that can be recognised in the cost of the asset, including financing costs, have been entered as property, plant and equipment in the Group balance sheet up to 30 April 2023. The capitalisation of costs was discontinued at the start of OL3's commercial operation.

In the income statement, the most significant changes can be seen under turnover, materials and services, depreciation and impairment charges, other expenses and finance income and expenses. In the balance sheet, the most significant changes can be seen under property, plant and equipment, inventories and trade and other receivables as well as deferred income.

Segment reporting

SEGMENT STRUCTURE IN TVO

The Group has one reportable segment; nuclear power. The electricity of the nuclear power segment is produced at three nuclear power plant units, Olkiluoto 1 (OL1), Olkiluoto 2 (OL2) and Olkiluoto 3 (OL3). The subsidiary of TVO, TVO Nuclear Services Oy (TVONS), the operation of which is related to nuclear power, is also included in the nuclear power segment.

The OL3 commercial operation started on 1 May 2023. Along with this, the capitalisation of OL3 project costs was ended and the recognition of depreciation was commenced.

SEGMENT ACCOUNTING POLICIES

The segment reporting TVO Group discloses is based on the internal reporting the chief operating decision maker follows. The same accounting policies are used in the segment reporting and TVO Group's financial statements. Adjustments made under IFRS accounting policies are reported at Group level.

The Board of Directors, which is the chief operating decision maker in TVO, monitors reporting in accordance both with the Finnish Accounting Standards (FAS) and IFRS-standards. TVO Group discloses in the note Segment reporting; turnover, profit/loss for the period and assets.

Turnover by segments

EUR 1,000	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Nuclear power	700,849	587,041	876,204
Total	700,849	587,041	876,204

Profit/loss for the period by segments

EUR 1,000	Q1–Q3 2024	Q1–Q3 2023	Q1–Q4 2023
Nuclear power	28,499	52,545	118,216
Profit/loss before appropriations (FAS)	28,499	52,545	118,216
The impact of the nuclear waste management obligation	-4,557	-5,746	12,998
The impact of financial instruments	172	-234	-240
The impact of finance leases	-1,199	-74	-203
The impact of subordinated shareholder loans (hybrid equity)	34,691	17,645	29,291
The depreciation of OL3 IFRS plant investment	3,383	1,893	3,007
The capitalization of interests	1,589	721	757
The impact of joint ventures	-145	104	173
Total (IFRS)	62,433	66,854	163,999

Assets by segments

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Nuclear power	7,685,436	7,792,025	7,713,972
Total (FAS)	7,685,436	7,792,025	7,713,972
The impact of the nuclear waste management obligation	1,379,312	1,316,600	1,375,844
The impact of financial instruments	124,300	201,909	155,782
The impact of finance leases	42,189	44,459	43,892
The impact of subordinated shareholder loans (hybrid equity)	-60,863	-60,863	-60,863
Other IFRS adjustments	179	-5,938	-3,110
The impact of joint ventures	2,914	2,990	3,059
Total (IFRS)	9,173,467	9,291,182	9,228,576

Property, plant and equipment and intangible assets

Changes in property, plant and equipment

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Opening net book amount	6,357,069	6,363,783	6,363,783
Increase	51,522	414,069	460,101
Decrease	-42	-297,793	-299,090
Transfer between categories	0	0	-64
Depreciation and impairment charges	-186,349	-115,890	-178,187
Accumulated depreciation from deduction	3	511	10,526
Closing net book amount	6,222,203	6,364,680	6,357,069

Changes in intangible assets

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Opening net book amount	2,515	2,476	2,476
Increase	539	352	577
Decrease	-108	-115	-115
Transfer between categories	0	0	64
Depreciation and impairment charges	-416	-357	-487
Closing net book amount	2,530	2,356	2,515

The commercial operation of OL3 started on 1 May 2023. Starting the commercial operation means that in accordance with the IAS 16 Property, Plant and Equipment Standard, the capitalisation of OL3 project costs was ended and the recognition of depreciation was commenced. EUR 250.0 million was transferred from the OL3 investment to operating-time fuel (inventories) when the OL3 plant unit entered commercial operation.

Financial risk management

The objectives of financial risk management and finance policy are the same as those applied to the annual financial statement for the year ended 31 December 2023.

DERIVATIVE FINANCIAL INSTRUMENTS

Nominal values of the derivative financial instruments

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Interest rate swaps	2,475,000	2,235,000	2,275,000
Forward foreign exchange contracts and swaps 1)	41,058	70,325	60,109
Cross-currency swaps	287,440	331,342	331,337
Total	2,803,498	2,636,667	2,666,446

¹⁾ Forward contracts are mainly used for hedging fuel purchases against currency risk. The opposite forward contracts, which have been acquired to adjust these hedging amounts are netted in the table with each other, whereby the nominal describes the protected position.

Fair values of the derivative financial instruments ¹⁾

		30 Sep 2024			30 Sep 2023		31 Dec 2023		
EUR 1,000	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Interest rate swaps									
Cash flow hedges	107,096	-6,573	100,523	204,221		204,221	137,958	-5,263	132,695
Fair value hedges	20,885	-7,756	13,129		-27,694	-27,694	14,372	-14,217	155
Forward foreign exchange contracts and swaps									
Cash flow hedges	3,101	-485	2,616	8,746		8,746	6,696	-592	6,104
Non-hedges	773	-49	724	505	-79	426	569	-82	487
Cross-currency swaps									
Non-hedges	9,293	-4,697	4,596	5,189	-11,357	-6,168	13,036	-6,413	6,623
Total	141,148	-19,560	121,588	218,661	-39,130	179,530	172,631	-26,567	146,064

¹⁾ Cross-currency swaps related to Private Placements included.

TVO Group's debt structure by maturity

30 Sep 2024 EUR 1,000	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-	Total
Loans from financial institutes	5,909	326,104	26,104	26,104	11,818		1,240				397,279
Public bonds	93,193	239,580	650,000	675,000	600,000	194,247	623,000	600,000	215,000	280,000	4,170,020
Lease liabilities	477	44,233	528	522	26	58					45,845
Total	99,579	609,917	676,632	701,626	611,844	194,305	624,240	600,000	215,000	280,000	4,613,144

TVO Group's credit commitment by maturity

30 Sep 2024 EUR 1,000	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-	Total
Syndicated revolving credit facility			111,111	888,889							1,000,000
Total			111,111	888,889							1,000,000

The average interest rate on loans and derivatives on 30 September 2024 was 2.81% (31 December 2023: 2.62%).

On September 2024, the Group had undrawn credit facilities amounting to EUR 1,000 (31 December 2023: 1,000) million. In addition, the Group had cash equivalents amounting to EUR 366 (31 December 2023: 288) million.

Cash and cash equivalents consist of cash on hand, demand deposits and other current liquid investments. Fund units consist of fund unit investments that are valued at fair value.

Disclosure of fair value measurements by the level of fair value measurement hierarchy

	3	0 Sep 2024		3		
EUR 1,000	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial assets at fair value						
Derivative financial instruments at fair value through profit or loss		10,066			13,605	
Derivative financial instruments designated as cash flow hedges		110,197			144,654	
Derivative financial instruments designated as fair value hedges		20,885			14,372	
Investments in other shares 1)			1,692			1,692
Total		141,148	1,692		172,631	1,692
Financial liabilities at fair value						
Derivative financial instruments at fair value through profit or loss		4,746			6,495	
Derivative financial instruments designated as cash flow hedges		7,058			5,855	
Derivative financial instruments designated as fair value hedges		7,756			14,217	
Total		19,560			26,567	

¹⁾ On 30 September 2024, TVO has unquoted shares worth EUR 1,692 (31 December 2023: 1,692) thousand. Direct market prices are not available for unquoted shares and therefore their fair value is determined using methods based on management judgement.

Fair value estimation

The derivative financial instruments are initially recognised at fair value on the date a derivative contract is entered into and are subsequently measured at fair value. The fair values are determined using a variety of methods and financial valuation techniques, and assumptions are based on market quotations at the balance sheet date (Level 2). The fair value of the interest rate swaps is the present value of the estimated future cash flows. The forward contracts are measured using the market quotes at the closing date. The fair value of the interest rate options is calculated using market quotes at the closing date and by using the Black and Scholes option valuation model. The changes in fair value of the interest rate swaps and forward contracts are recognised in equity or profit or loss, depending on whether they qualify for cash flow hedges or not. The changes in fair value of interest rate options are presented in the income statement.

Book values of financial assets and liabilities by categories

	30) Sep 2024			31 Dec 2023	
EUR 1,000	Financial liabilities measured at amortised cost	Book value	Fair value	Financial liabilities measured at amortised cost	Book value	Fair value
Non-current liabilities						
Other financial liabilities ¹⁾	3,917,949	3,917,949	3,925,281	4,278,295	4,278,295	4,197,754

¹⁾ Bonds and EUR-fixed loans included

For other financial assets and liabilities than the ones presented in the table, the book value corresponds to their fair value.

Assets and provision related to nuclear waste management obligation

The balance sheet contains assets and liabilities concerning the nuclear waste management obligation

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
_ The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	1,046,104	1,001,904	1,035,276
Provision related to nuclear waste management (non-current liabilities)	1,297,377	1,248,852	1,289,352

TVO's legal liability as stated in the Nuclear Energy Act and the Company's share in the Finnish State Nuclear Waste Management Fund

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Liability for nuclear waste management according to the Nuclear Energy Act	1,918,200	1,839,600	1,918,200
Funding target obligation	1,525,100	1,457,900	1,525,100
TVO's share in the Finnish State Nuclear Waste Management Fund	1,525,100	1,457,900	1,457,900
Difference between the liability and TVO's share of the Fund	393,100	381,700	460,300

The costs of decommissioning the power plant and disposal of spent fuel are covered by the provision related to the nuclear waste management obligation. Cost estimates are updated annually and the technical plans and total cost estimates every third year. The next update is in 2025.

The total cost estimate based on a nuclear waste management technical plan and schedule was updated last time in June 2022. The present initial value of the provision for the decommissioning of a nuclear power plant (at the time of commissioning the nuclear power plant) has been capitalised as property, plant and equipment and will be adjusted later for possible changes in the plan. The costs for spent fuel disposal are expensed based on fuel usage during the operating time of the plant. The impact of any changes to the plans and schedules will be recognised immediately in the income statement based on fuel used by the end of each accounting period.

TVO contributes funds to the Finnish State Nuclear Waste Management Fund to cover future obligations based on the legal liability calculated according to the Nuclear Energy Act. In March 2024, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee for 2023 at EUR 28.5 million, which TVO paid in March 2024. The return from the investment activities of the Finnish State Nuclear Waste Management Fund in 2023 was positive and, as a result, a part of the investment returns for 2023 was allocated as security for the statutory protected portion and the surplus reduced TVO's nuclear waste management fee for 2023. Therefore, the cash security of approximately EUR 44 million for the protected portion that was submitted to the Fund in 2023 was returned to TVO in March 2024. The nuclear waste management fee for 2024 will be confirmed in March 2025.

The OL1/OL2 plant units' and the OL3 plant unit's liabilities and shares in the Fund are calculated and recorded separately, as the corresponding total cost estimates are prepared separately for the plant units. In December 2023, the Ministry of Economic Affairs and Employment (MEAE) set TVO's liability for nuclear waste management at EUR 1,918.2 (1,839.6) million for the end of 2023 and TVO's funding target in the Finnish State Nuclear Waste Management Fund for 2024 at EUR 1,525.1 (1,457.9) million. In addition, the MEAE has decided that the liability for 2024 is EUR 1,928.5 million, of which EUR 1,483.7 million belongs to OL1/OL2 and EUR 444.8 million belongs to OL3.

According to Section 40 Clause 1 of the Nuclear Energy Act, the Fund target for each calendar year shall be equal to the liability of the previous calendar year. In order to balance the effects of nuclear waste management costs on several operating years of the nuclear plant, the Fund target is however lower than the liability, while the preconditions stipulated in Section 40 are fulfilled. Time-based periodisation (40 years) is used to calculate the OL3 plant unit's Fund target, according to Section 40 Clause 2 of the Nuclear Energy Act and the Government Decree (991/2017) Section 5.

TVO's share in the Finnish State Nuclear Waste Management Fund on 30 September 2024 is EUR 1,525.1 million. The carrying amount in the balance sheet is EUR 1,046.1 million. The difference is due to the fact that IFRIC 5 limits the carrying amount of TVO's interest in the Finnish State Nuclear Waste Management Fund to the amount of the related liability since TVO does not have control over the Finnish State Nuclear Waste Management Fund. As long as the Fund is overfunded from an IFRS perspective, the effects to operating profit from this adjustment will be positive if the provision increases more than the Fund, and negative if the actual value of the fund increases more than the provision. On 30 September 2024 the OL1/OL2 plant units' share in the Fund is higher than the provision according to IFRS, due to which above-mentioned adjustment is recorded for the OL1/OL2 plant units' nuclear waste management IFRS calculation. The OL3 plant unit's share in the Fund on 30 September 2024 is in turn lower than the provision according to IFRS, and therefore above-mentioned adjustment is not recorded.

TVO has issued the State the shareholders' guarantees as security to cover the unexpected events as determined in the Nuclear Energy Act. The guarantees are presented in the note Obligations and other commitments.

Obligations and other commitments

Pledged promissory notes and financial guarantees

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	727,500	727,500	757,500
Guarantees given by shareholders related to the nuclear waste management obligation	596,250	557,740	557,740

According to the Nuclear Energy Act Section 44, the company liable for nuclear waste management must assign securities to the state according to the terms stipulated by Section 45 before operations which produce waste are initiated, and otherwise at the end of each June.

Investment commitments

Agreement-based commitments regarding the acquisition of property, plant and equipment:

EUR 1,000	30 Sep 2024	30 Sep 2023	31 Dec 2023
Investment commitments	108,200	124,800	117,500

PENDING COURT CASES AND DISPUTES

Pending Court Cases and Disputes are to be found on page 5.



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