



2023

INTERIM  
REPORT

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# Teollisuuden Voima Oyj's Interim Report 1 January–31 March 2023

## During the first quarter of 2023, Teollisuuden Voima's (TVO) electricity generation at the Olkiluoto 1 (OL1) and Olkiluoto 2 (OL2) plant units continued safely and reliably.

During the Olkiluoto 3 EPR plant unit's (OL3) production break which started in January, new impellers were installed in all four feedwater pumps at the turbine island. In addition, the servicing of the pressurizer safety valve stations was completed. Electricity production and the test production programme were continued in mid-March, when a 24-hour performance test was carried out and a month-long demonstration run was started. OL3's test production phase has been completed and regular electricity production started in April 2023. OL3 significantly improves Finland's electricity self-sufficiency and helps in achieving carbon neutrality goals.

The processing of Posiva's operating licence has progressed at the Radiation and Nuclear Safety Authority in Finland (STUK), and Posiva has submitted responses to the requested additional information. The installations and deployment of systems at the encapsulation plant have progressed as planned. Underground in the first actual deposition tunnel, investigations are underway relating to assessing the suitability of the tunnel and defining the locations of the deposition holes for the final disposal of nuclear fuel. In the trial run tunnel, which is used to demonstrate production, the drilling of the test deposition holes is underway.

## Operating environment

In 2022, nuclear power was included in the EU's Sustainable Finance Taxonomy. The application of the criteria began on 1 January 2023.

Russia's attack on Ukraine continues to significantly impact the political situation in terms of safety and energy. The TVO Group closely follows the situation in Ukraine and its impact on the Group's operations. The TVO Group condemns Russia's attack on Ukraine. The Ukrainian situation has not had an immediate or direct effect the Group's operations or the production of electricity. However, cost increases are being prepared for in the TVO Group.

As a consequence of Russia's attack on Ukraine, energy prices have risen. The EU Member States have accepted several emergency measures, such as a revenue cap on so-called inframarginal electricity production methods (including nuclear power), the implementation of which has been left to the Member States. In Finland, the Parliament approved the government proposal regarding a temporary profit tax for electricity companies for 2023.

In addition to short-term measures, the European Commission also proposed changes to the EU's electricity market rules in March 2023. The Commission's proposal aims at e.g. improving the availability of long-term power purchase agreements (PPA) especially for small consumers, as well as making Contracts for Difference (CfD) a central solution in supporting new electricity production. The Member

States and the European Parliament are expected to form their position on the initiative with an accelerated process so that the proposal could be accepted before the European election in 2024.

A parliamentary election was held in Finland in spring 2023. The next government is expected to continue the nuclear industry regulation reform, which assesses e.g. the current qualification process of nuclear power plants. Finland has good prerequisites for continuing investments into clean electricity production, and therefore the improvement of industrial competitiveness. However, the situation may be influenced on a political level by the recently approved EU's Energy Efficiency Directive, which obligates Finland to reduce its end-use energy by approximately 240 terawatt hours by 2030.

## Financial performance

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 under 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 consolidated turnover for the period under review 1 January–31 March 2023 was EUR 113.1 (1 January–31 March 2022: EUR 83.3) million.

The amount of electricity delivered to shareholders was 4,710 (3,975) GWh. The higher delivery volume of electricity compared to the previous year is due to OL3's electricity production.

The consolidated profit/loss was EUR -3.2 (-10.3) 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 relented to shareholders, amounted to EUR 5,701.8 (31 December 2022: 5,727.1) million, of which EUR 929.3 (929.3) million were subordinated shareholder loans. TVO raised a total of EUR 100.0 (31 March 2022: 600.0) million in non-current liabilities and repaid non-current liabilities in the amount of EUR 220.0 (111.8) million.

TVO has a three-year revolving credit facility of EUR 1,000 million, which is valid until 2025. In addition, TVO has a shareholder loan commitment of EUR 400 million, which is valid until the end of 2023.

During the period under review, TVO signed a bilateral bank loan totalling EUR 100 million.

The OL3 project's share of financing costs has been capitalised in the balance sheet.

TVO uses its right to borrow funds back from the Finnish State Nuclear Waste Management Fund within the framework of legal regulations. On 31 March 2023, the amount of the loan was EUR 727.5 (31 December 2022: 651.3) million and it has been relented to TVO's shareholders. On 31 March 2023, the loan from the Finnish State Nuclear Waste Management Fund increased by EUR 76.2 (31 March 2022: decreased by 59.9) million.

In March 2023, Japan Credit Rating Agency (JCR) affirmed its long-term credit rating A+ for TVO and changed the outlook from negative to stable. TVO also has a long-term credit rating BB+ from S&P Global Ratings (S&P) with a positive outlook and a long-term credit rating BBB- from Fitch Ratings (Fitch) with a stable outlook.

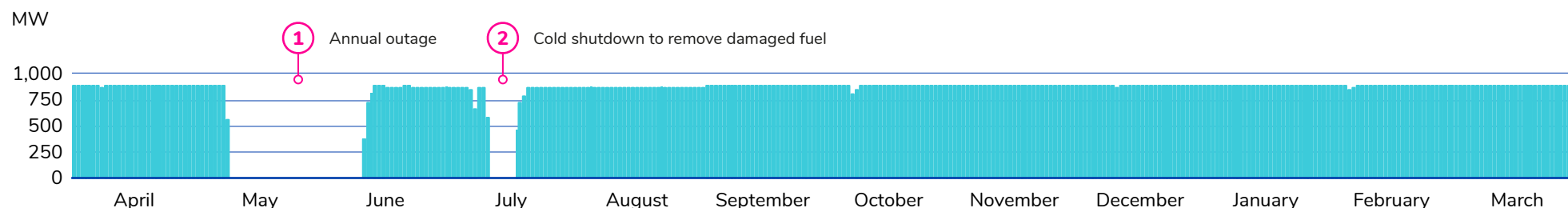
### Electricity production

The electricity production of the Olkiluoto nuclear power plant units, OL1, OL2, and OL3, during the period under review was 4,718 (3,985) GWh. The total load factor of OL1 and OL2 was 99.1 (100.0) percent.

During the period under review, OL1 and OL2 operated safely and reliably. OL3 was connected to the national grid for the first time in March 2022, and the plant unit's test production phase has been ongoing during the period under review. OL1's net production was 1,935 (1,940) GWh and the load factor 100.9 (100.0) percent. OL2's net production was 1,864 (1,928) GWh and the load factor 97.2 (100.0) percent. OL3's net production was 919 (117) GWh and the load factor 26.4 (17.3) percent.

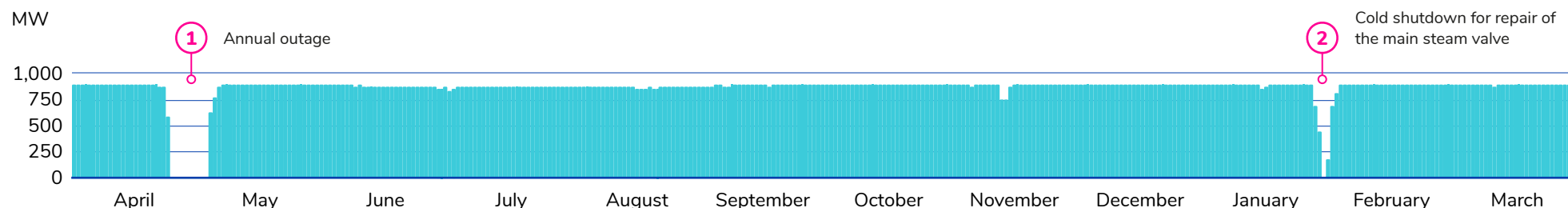
#### OL1 Production

Average output 1 April 2022–31 March 2023



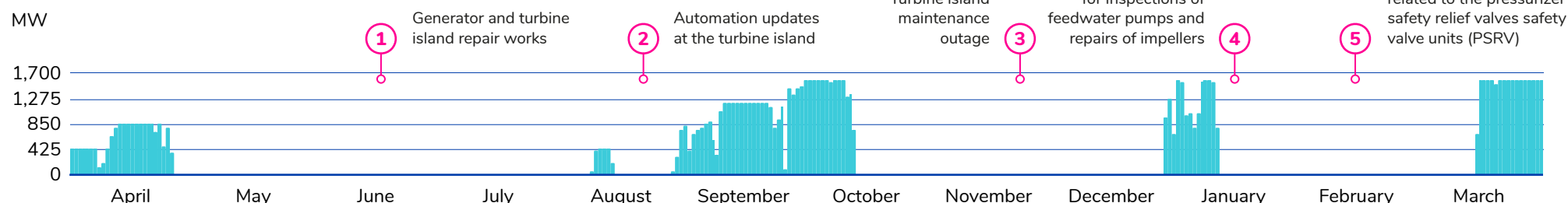
#### OL2 Production

Average output 1 April 2022–31 March 2023



#### OL3 Production

Average output 1 April 2022–31 March 2023



## Significant plant events at OL1 and OL2

The OL2 plant unit's electricity production was interrupted between 27 and 29 January 2023 in order to repair the main steam valve. During periodic tests, a long closing time was observed in the main steam valve, due to which the valve was repaired during a cold shutdown state of the plant unit. The repair was carried out according to plan.

The environmental permit authority has issued a comment and an investigation request regarding a malfunction at OL1's and OL2's debris handling building. Solid material is extracted from the cooling water at the debris handling building. TVO is carrying out modifications at the building, which are estimated to be completed by the end of June 2023. In addition, the effects of the malfunction on water bodies is being investigated.

## Olkiluoto 3 EPR

OL3 was procured as a fixed-price turnkey project from a consortium (Plant Supplier) formed by Areva GmbH, Areva NP SAS, and Siemens AG. As stipulated in the Plant Contract, the consortium companies have joint and several liability for the contractual obligations.

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 under 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.

TVO's right to terminate the Plant Contract in accordance with the GSA was postponed until 30 June 2023. In addition, the payment of approximately EUR 193 million of the delay compensation agreed upon in the GSA of 2018 was postponed until the completion of OL3, up to 30 June 2023 at the latest.

TVO's current cost estimate, and the effects of the GSA, TVO estimates that its total investment in the OL3 project will be approximately EUR 5.8 billion.

At the end of the reporting period, the Plant Supplier's workforce at OL3 was approximately 600 people. The occupational safety at OL3 remained at a good level.

All realised costs of the OL3 project that can be recognised in the cost of the asset have been entered as property, plant, and equipment in the Group balance sheet. In addition, TVO has recorded receivables from the Plant Supplier for the delay and additional delay compensations.

The Plant Supplier is obligated to complete the plant unit in accordance with the Plant Contract and the GSA.

## Significant events at OL3

In autumn 2022, cracks were identified in the impellers of the feedwater pumps located in OL3's turbine island. After investigations, test production was continued in December 2022 with two cracked impellers and two spare impellers. In January 2023, test production was interrupted due to maintenance and repair work, when impellers with more robust measurements were installed at the feed water pumps.

The continuation of test production was postponed to March 2023 due to the servicing of the pressurizer valve stations. At the end of the period under review, an approximately month-long demonstration run was ongoing, after which OL3's regular electricity production started in April 2023. During the demonstration run, OL3 produced electricity as planned.

## Nuclear fuel

During the period under review, nuclear fuel purchases amounted to EUR 25.4 (22.5) million and the amount consumed to EUR 19.2 (16.7) million.

The nuclear fuel and uranium stock carrying value on 31 March 2023 was EUR 271.2 (31 December 2022: 262.4) million. Once the OL3 plant unit proceeds to commercial operation, approximately EUR 250 million will be transferred from the OL3 investment to the value of the nuclear fuel and uranium stock.

## 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 1,245.8 (31 December 2022: 1,294.3) million, calculated according to the international IFRS accounting principles. TVO's share in the Finnish State Nuclear Waste Management Fund, EUR 999.2 (31 December 2022: 999.7) million, is presented under assets in accordance with the IFRIC 5 interpretation. The total cost estimate based on a new nuclear waste management technical plan and schedule has been updated in June 2022.

The cost estimate of nuclear waste management for financial provision, i.e. the nuclear waste management scheme for 2022–2024, the preliminary nuclear waste management scheme for 2025–2026, as well as total costs for 2027–2028 were submitted to the Ministry of Economic Affairs and Employment (MEAE) at the end of June 2022. The amount of the nuclear waste management fee to be collected from a company liable for nuclear waste management is based on the nuclear waste management scheme.

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 2022, the MEAE set TVO's liability for nuclear waste management at EUR 1,839.6 (1,816.1) million for the end of 2022 and TVO's funding target in the Finnish State Nuclear Waste Management Fund for 2023 at EUR 1,457.9 (1,436.1) million. In addition, the MEAE has decided that the liability for 2023 is EUR 1,832.4 million, of which EUR 1,426.2 million belongs to OL1/OL2 and EUR 406.2 million belongs to OL3.

In March 2023, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee for 2022 at EUR 39.3 million, which TVO paid on 31 March 2023.

In order to supplement the legal protected portion, TVO provided the Nuclear Waste Management Fund with a cash security of approximately EUR 43.7 million. The nuclear waste management fee for 2023 will be confirmed in March 2024.

## 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 in Olkiluoto and Fortum Power and Heat Oy (Fortum) in Loviisa.

Work at Posiva's encapsulation plant site and final disposal facility at ONKALO has proceeded as planned. The encapsulation plant's system installations are progressing. Approximately 430 metres underground, in the first actual deposition tunnel, investigations are underway relating to assessing the suitability of the tunnel and defining the locations of the deposition holes for the final disposal of nuclear fuel. In the trial run tunnel, which is used to demonstrate production, the drilling of the test deposition holes is underway. The underground installations of civil and building technology are progressing on schedule.

The operating licence application for the final disposal facility was submitted to the Finnish Government in December 2021. Final disposal activities are to begin in the mid-2020s.

## Acquisitions of tangible and intangible assets and shares

Investments during the period under review were EUR 76.7 (87.4) million. Investments of the parent company were EUR 84.6 (90.5) million, of which EUR 72.5 (76.3) million were allocated to the OL3 project, and EUR 12.1 (14.2) million were allocated to the OL1 and OL2 plant units and the general infrastructure of the area.

Hitachi Energy and TVO signed a turnkey contract in summer 2021 about delivering one of Europe's

largest battery energy storage systems to Olkiluoto. The 90-megawatt system will support the entire energy network in a potential production disturbance of the OL3 plant unit, thus minimising the effect of power fluctuations on the grid as part of Fingrid's system protection. Takeover of the battery energy storage system is planned to take place during summer 2023.

## Pending court cases and disputes

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

## Personnel

The total number of personnel in the Group at the end of the period under review was 1,033 (31 December 2022: 1,007, 31 March 2022: 1,006). The number of permanent employees in the Group at the end of the period under review was 995 (31 December 2022: 986, 31 March 2022: 988).

## Annual General Meeting

TVO's Annual General Meeting on 30 March 2023 approved the financial statements for 2022 and discharged the members of the Board of Directors and the President and CEO from liability. **Kaarlo Höysniemi** was elected as a new member of the Board to replace **Seppo Parvi**. The other members of the Board were re-elected.

At its organisation meeting, the Board elected **Ilkka Tykkyläinen** as Chair of the Board and **Petra Lundström** as Vice-Chair. The Board also chose from among its members the members and chairs of the Board Committees.

## 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 2022 Report of the Board of Directors.

The regular electricity production that began after the test period and commercial operation that will start on May 1, 2023, transferred the responsibility of the plant to TVO. The Plant Supplier retains the responsibilities according to the Plant Contract for warranty periods and for that unfinished work, which has been agreed to be done later at the Plant Supplier's expense.

The TVO Group has contingency plans for different scenarios resulting from the Ukrainian situation and the impact on the Group's operations is closely followed. Due to the situation, the extensively higher prices and interests may increase TVO's production costs.

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 protected portion covered by securities as well as the nuclear waste management fee.

## Assessment of year-end developments

In the current financial year, electricity production is

expected to increase with the start of OL3's regular electricity production. The prerequisites for nuclear power production in Olkiluoto are good. Nuclear fuel availability is guaranteed by long-term agreements.

OL3's regular electricity production started in April 2023.

TVO will carefully follow the fulfilment of the conditions according to the 2018 settlement agreement and the amendment agreements signed in June 2021. The Plant Supplier is obligated to complete the plant unit in accordance with the Plant Contract and the Global Settlement Agreement. After the takeover of OL3, the guarantee period in accordance with the Plant Contract will begin. The final acceptance of the plant unit will take place upon termination of the two-year warranty period. Even after that, the plant supplier's liabilities under the warranty will remain in force to a certain extent for eight (8) years at most.

Posiva continues the implementation of the final disposal plant project. The technical acquisitions at the final disposal facility are progressing. Installation work as well as the qualification and production of equipment is taking place at the encapsulation plant.

## Events after the period under review

Test production phase of Olkiluoto 3 has been completed and regular electricity production started on 16 April 2023.

The annual outages started on 16 April 2023 when the Olkiluoto 1 plant unit was disconnected from electricity production for a refuelling outage which will take about one week.

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TVO decided to submit on 20 April 2023 to the OL3 plant supplier the Provisional Takeover Certificate. In addition TVO confirmed that the commercial operation of the plant will start on 1 May 2023. This means, among others, that the capitalisation of project costs ends and the recognition of depreciation commences. The shareholders' right to the electricity produced by OL3 and their liability for the annual costs of electricity production are determined in compliance with TVO's Articles of Association. TVO released a stock exchange release about the matter.

20 April 2023

**Teollisuuden Voima Oyj**  
Board of Directors

## Key Figures of TVO Group

TVO Group (IFRS) (M€)	Q1 2023	Q1 2022	Q1–Q4 2022
Turnover	113	83	358
Profit/loss for the period	-3	-10	-48
Investments <sup>1)</sup>	77	87	312
Equity	2,179	2,116	2,218
Subordinated shareholder loans (hybrid equity) (included in the former) <sup>3)</sup>	929	929	929
Non-current and current interest-bearing liabilities (excluding loan from VYR) <sup>2)</sup>	4,805	5,023	4,831
Loan from VYR <sup>2)</sup>	728	651	651
Provision related to nuclear waste management	1,246	1,366	1,294
Balance sheet total	9,091	9,296	9,171
Equity ratio % <sup>4)</sup>	30.6	29.1	30.7
Average number of personnel	1,026	1,003	1,031

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

<sup>2)</sup> The Finnish State Nuclear Waste Management Fund (VYR).

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

<sup>4)</sup> Equity ratio % =  $100 \times \frac{\text{equity}}{\text{balance sheet total - provision related to nuclear waste management - loan from the Finnish State Nuclear Waste Management Fund}}$

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 Oyj (FAS) (M€)

The parent company's interim financial statement has been made in accordance with the Finnish Accounting Standards (FAS).

	Q1 2023	Q1 2022	Q1–Q4 2022
Turnover	112	83	353
Profit/loss before appropriations	19	-2	-10
Fuel costs	19	17	70
Nuclear waste management costs	24	23	100
Capital expenditure (depreciation and financial income and expenses)	11	10	37
Investments <sup>1)</sup>	85	91	339
Equity	864	861	864
Appropriations	200	191	181
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) <sup>2)</sup>	4,772	4,984	4,798
Loans from equity holders of the company <sup>3)</sup>	929	929	929
Loan from VYR <sup>2)</sup>	728	651	651
Balance sheet total	7,627	7,757	7,602
Equity ratio % <sup>4)</sup>	28.9	27.9	28.4
Average number of personnel	1,024	1,001	1,029

<sup>1)</sup> Acquisitions of tangible and intangible assets and shares are based on gross investments.

<sup>2)</sup> The Finnish State Nuclear Waste Management Fund (VYR).

<sup>3)</sup> Subordinated loans.

<sup>4)</sup> Equity ratio % =  $100 \times \frac{\text{equity} + \text{appropriations} + \text{loans from equity holders of the company}}{\text{balance sheet total} - \text{loan from the Finnish State Nuclear Waste Management Fund}}$

### Electricity delivered to equity holders of the company (GWh)

	Q1 2023	Q1 2022	Q1–Q4 2022
Nuclear power	4,710	3,975	16,316
<b>Total</b>	<b>4,710</b>	<b>3,975</b>	<b>16,316</b>

# Consolidated financial statement in brief and notes

## Consolidated Income Statement

EUR 1,000	Q1 2023	Q1 2022	Q1–Q4 2022
<b>Turnover</b>	<b>113,061</b>	<b>83,348</b>	<b>358,208</b>
Work performed for own purposes	5,278	5,986	21,310
Other income	2,273	2,804	13,068
Materials and services	-53,004	-35,344	-137,884
Personnel expenses	-19,621	-18,763	-80,316
Depreciation and impairment charges	-11,915	-11,394	-46,992
Other expenses	-23,842	-22,883	-100,625
<b>Operating profit/loss</b>	<b>12,230</b>	<b>3,754</b>	<b>26,769</b>
Finance income	825	187	6,295
Finance expenses	-16,405	-14,243	-81,480
Total finance income and expenses	-15,580	-14,056	-75,185
Share of the profit/loss of joint ventures	118	34	590
<b>Profit/loss before income tax</b>	<b>-3,232</b>	<b>-10,268</b>	<b>-47,826</b>
Income taxes	0	0	-52
<b>Profit/loss for the period</b>	<b>-3,232</b>	<b>-10,268</b>	<b>-47,878</b>
<b>Profit/loss for the period attributable to:</b>			
Equity holders of the company	-3,232	-10,268	-47,878

## Consolidated Statement of Comprehensive Income

EUR 1,000	Q1 2023	Q1 2022	Q1–Q4 2022
Profit/loss for the period	-3,232	-10,268	-47,878
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges	-27,599	64,766	211,736
Total other comprehensive profit/loss items for the period	-27,599	64,766	211,736
<b>Total comprehensive profit/loss for the period</b>	<b>-30,831</b>	<b>54,498</b>	<b>163,858</b>
<b>Total comprehensive profit/loss for the period attributable to:</b>			
Equity holders of the company	-30,831	54,498	163,858



## Consolidated Statement of Financial Position

EUR 1,000	31 Mar 2023	31 Mar 2022	31 Dec 2022
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	6,366,399	6,243,916	6,363,783
Intangible assets	2,513	2,503	2,476
Loans and other receivables	787,123	654,130	710,962
Investments in joint ventures	4,014	5,550	3,897
Investments in shares	1,935	1,935	1,935
Derivative financial instruments	198,206	85,132	225,183
Share in the Finnish State Nuclear Waste Management Fund	992,202	1,009,397	999,662
<b>Total non-current assets</b>	<b>8,352,392</b>	<b>8,002,563</b>	<b>8,307,898</b>
<b>Current assets</b>			
Inventories	281,469	281,290	272,378
Trade and other receivables	284,802	266,949	233,078
Derivative financial instruments	3,411	7,163	4,463
Cash and cash equivalents	169,219	737,562	353,203
<b>Total current assets</b>	<b>738,901</b>	<b>1,292,964</b>	<b>863,122</b>
<b>Total assets</b>	<b>9,091,293</b>	<b>9,295,527</b>	<b>9,171,020</b>

EUR 1,000	31 Mar 2023	31 Mar 2022	31 Dec 2022
<b>Equity and liabilities</b>			
<b>Capital and reserves attributable to equity holders of the company</b>			
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	201,128	81,757	228,727
Subordinated shareholder loans (hybrid equity)	929,300	929,300	929,300
Retained earnings	206,023	262,662	216,742
<b>Total equity</b>	<b>2,179,199</b>	<b>2,116,467</b>	<b>2,217,517</b>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Provision related to nuclear waste management	1,245,772	1,366,127	1,294,345
Loan from the Finnish State Nuclear Waste Management Fund	727,500	651,339	651,339
Bonds	3,135,770	3,143,886	3,254,801
Other financial liabilities	1,358,271	1,004,742	1,276,463
Derivative financial instruments	28,358	2,438	40,040
<b>Total non-current liabilities</b>	<b>6,495,671</b>	<b>6,168,532</b>	<b>6,516,988</b>
<b>Current liabilities</b>			
Current financial liabilities	282,645	869,552	258,669
Derivative financial instruments	173	2,388	544
Advance payments received	23,057	21,217	23,064
Trade payables	7,145	34,122	16,821
Other current liabilities	103,403	83,249	137,417
<b>Total current liabilities</b>	<b>416,423</b>	<b>1,010,528</b>	<b>436,515</b>
<b>Total liabilities</b>	<b>6,912,094</b>	<b>7,179,060</b>	<b>6,953,503</b>
<b>Total equity and liabilities</b>	<b>9,091,293</b>	<b>9,295,527</b>	<b>9,171,020</b>

## 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
<b>Equity 1 Jan 2023</b>	<b>600,365</b>	<b>242,383</b>	<b>228,727</b>	<b>929,300</b>	<b>216,742</b>	<b>2,217,517</b>	<b>2,217,517</b>
Profit/loss for the period	0	0	0	0	-3,232	-3,232	-3,232
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	-27,599	0	0	-27,599	-27,599
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-7,487	-7,487	-7,487
<b>Equity 31 Mar 2023</b>	<b>600,365</b>	<b>242,383</b>	<b>201,128</b>	<b>929,300</b>	<b>206,023</b>	<b>2,179,199</b>	<b>2,179,199</b>

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
<b>Equity 1 Jan 2022</b>	<b>600,365</b>	<b>242,383</b>	<b>16,991</b>	<b>929,300</b>	<b>274,022</b>	<b>2,063,061</b>	<b>2,063,061</b>
Profit/loss for the period	0	0	0	0	-10,268	-10,268	-10,268
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	64,766	0	0	64,766	64,766
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-1,092	-1,092	-1,092
<b>Equity 31 Mar 2022</b>	<b>600,365</b>	<b>242,383</b>	<b>81,757</b>	<b>929,300</b>	<b>262,662</b>	<b>2,116,467</b>	<b>2,116,467</b>

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
<b>Equity 1 Jan 2022</b>	<b>600,365</b>	<b>242,383</b>	<b>16,991</b>	<b>929,300</b>	<b>274,022</b>	<b>2,063,061</b>	<b>2,063,061</b>
Profit/loss for the financial year	0	0	0	0	-47,878	-47,878	-47,878
Other comprehensive profit/loss items:							
Cash flow hedges	0	0	211,736	0	0	211,736	211,736
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-9,402	-9,402	-9,402
<b>Equity 31 Dec 2022</b>	<b>600,365</b>	<b>242,383</b>	<b>228,727</b>	<b>929,300</b>	<b>216,742</b>	<b>2,217,517</b>	<b>2,217,517</b>

## Consolidated Statement of Cash Flows

EUR 1,000	31 Mar 2023	31 Mar 2022	31 Dec 2022
<b>Operating activities</b>			
Profit/loss for the period	-3,232	-10,268	-47,878
Adjustments:			
Taxes	0	0	52
Finance income and expenses	15,580	14,056	75,185
Depreciation and impairment charges	11,915	11,394	46,992
Share of the profit/loss of joint ventures	-118	-34	-590
Other non-cash flow income and expenses <sup>1)</sup>	5,585	-7,294	-46,163
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	-54,259	233	28,281
Increase (-) or decrease (+) in inventories	-9,063	-6,551	2,137
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	-20,127	10,385	31,875
Interest paid and other finance expenses	-926	-973	-4,253
Dividend received	0	0	2,209
Interest received	3,384	3,665	6,277
Taxes paid	0	0	-52
<b>Cash flow from operating activities</b>	<b>-51,261</b>	<b>14,613</b>	<b>94,072</b>

EUR 1,000	31 Mar 2023	31 Mar 2022	31 Dec 2022
<b>Investing activities</b>			
Acquisition of property, plant and equipment	-103,956	-155,547	-425,468
Acquisition of intangible assets	-149	-57	-372
Loan receivables granted	-76,160	-15,910	-15,831
Repayments of loans granted	0	75,837	75,837
<b>Cash flow from investing activities</b>	<b>-180,265</b>	<b>-95,677</b>	<b>-365,834</b>
<b>Financing activities</b>			
Withdrawals of long-term loans	176,160	600,000	1,050,000
Repayment of long-term loans	-219,951	-171,774	-517,415
Principal elements of lease payments	-1,052	-979	-2,409
Interest paid of subordinated shareholder loans (hybrid equity)	-2,272	-478	-6,079
Increase (+) or decrease (-) in current financial liabilities	104,887	222,299	62,740
Repayment of current financial liabilities	-10,230	-2,760	-134,190
<b>Cash flow from financing activities</b>	<b>47,542</b>	<b>646,308</b>	<b>452,647</b>
<b>Change in cash and cash equivalents</b>	<b>-183,984</b>	<b>565,244</b>	<b>180,885</b>
Cash and cash equivalents at the beginning of period	353,203	172,318	172,318
<b>Cash and cash equivalents at the end of period</b>	<b>169,219</b>	<b>737,562</b>	<b>353,203</b>

<sup>1)</sup> 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 consistent with those of the Group's annual financial statements for the year ended on 31 December 2022. Additionally, the changes according to the revised IAS/IFRS standards have been adopted. The Ukrainian situation does not currently directly affect the Group's operations or the production of electricity in the short term.

## 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 2022.

## Olkiluoto 3 EPR

The electricity production of the Olkiluoto 3 EPR plant unit (OL3) started on Saturday, 12 March 2022. Regular electricity production started in April 2023. 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.

The recognition criteria of the acquisition costs of the OL3 project was realised because all the necessary actions were completed to prepare the asset for its intended use. TVO decided to submit on 20 April 2023 to the OL3 plant supplier the Provisional Takeover Certificate. In addition TVO confirmed that the commercial operation of the plant will start on 1 May 2023. This means, among others, that the capitalisation of project costs ends and the recognition of depreciation commences. The shareholders' right to the electricity produced by OL3 and their liability for the annual costs of electricity production are determined in compliance with TVO's Articles of Association.

TVO's right to terminate the Plant Contract in accor-

dance with the GSA was postponed until 30 June 2023. In addition, the payment of approximately EUR 193 million of the delay compensation agreed upon in the GSA of 2018 was postponed until the completion of OL3, up to 30 June 2023 at the latest.

## Comparability of the consolidated income statement and balance sheet

The total cost estimate based on a new nuclear waste management technical plan and schedule was updated 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 updated cost estimate decreased the book value of property, plant and equipment related to decommissioning.

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 plan and schedules will be recognised immediately in the income statement based on fuel used by the end of each accounting period. The updated cost estimate

decreased the provision related to the nuclear waste management and increased the amount of materials and services. The overall effect on profit for the period was negative, because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services. The negative profit impact of the updates and changes was mainly non-recurring.

During the period under review the production schedule updated. Following the update the provision related to nuclear waste management decreased and expenses in materials and services increased. The overall effect on profit for the period is negative because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services, as the Nuclear Waste Management Fund is overfunded from an IFRS perspective. The negative profit impact of the updates and changes is mainly non-recurring.

See note **Assets and provisions related to nuclear waste management obligation**.

## 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.

### SEGMENT CALCULATION PRINCIPLES

The Board of Directors 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.

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

## Turnover by segments

EUR 1 000	Q1 2023	Q1 2022	Q1-Q4 2022
Nuclear power	113,061	83,348	358,208
<b>Total</b>	<b>113,061</b>	<b>83,348</b>	<b>358,208</b>

## Profit/loss for the period by segments

EUR 1 000	Q1 2023	Q1 2022	Q1-Q4 2022
Nuclear power	19,034	-2,084	-9,909
Profit/loss before appropriations (FAS)	19,034	-2,084	-9,909
The impact of the nuclear waste management obligation	-22,514	-7,811	-36,528
The impact of financial instruments	4	-755	-503
Other IFRS adjustments	126	348	681
The impact of joint ventures	118	34	-1,619
<b>Total (IFRS)</b>	<b>-3,232</b>	<b>-10,268</b>	<b>-47,878</b>

## Assets by segments

EUR 1 000	31 Mar 2023	31 Mar 2022	31 Dec 2022
Nuclear power	7,627,444	7,756,892	7,601,716
<b>Total (FAS)</b>	<b>7,627,444</b>	<b>7,756,892</b>	<b>7,601,716</b>
The impact of the nuclear waste management obligation	1,296,752	1,468,337	1,367,840
The impact of financial instruments	168,278	54,726	194,825
The impact of finance leases	45,669	47,514	46,072
Other IFRS adjustments	-49,853	-36,481	-42,319
The impact of joint ventures	3,003	4,539	2,886
<b>Total (IFRS)</b>	<b>9,091,293</b>	<b>9,295,527</b>	<b>9,171,020</b>

## Property, plant and equipment and intangible assets

### Changes in property, plant and equipment

EUR 1 000	31 Mar 2023	31 Mar 2022	31 Dec 2022
Opening net book amount	6,363,783	6,177,755	6,177,754
Increase	76,505	87,399	311,358
Decrease	-62,085	-9,942	-88,726
Depreciation and impairment charges	-11,804	-11,296	-46,582
Accumulated depreciation from deduction	0	0	9,979
Closing net book amount	6,366,399	6,243,916	6,363,783

### Changes in intangible assets

EUR 1 000	31 Mar 2023	31 Mar 2022	31 Dec 2022
Opening net book amount	2,476	2,543	2,542
Increase	148	58	483
Decrease	0	0	-414
Depreciation and impairment charges	-111	-98	-410
Accumulated depreciation from deduction	0	0	275
Closing net book amount	2,513	2,503	2,476

The OL3 investment is decreased by the delay compensation and additional delay compensation in accordance with the settlement agreement. Nuclear fuel to be used during electricity production, totalling approximately EUR 250 million, will be part of current assets when the OL3 plant unit starts 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 2022.

### DERIVATIVE FINANCIAL INSTRUMENTS

#### Nominal values of the derivative financial instruments

EUR 1 000	31 Mar 2023	31 Mar 2022	31 Dec 2022
Interest rate swaps	1,985,000	2,194,117	2,185,000
Forward foreign exchange contracts and swaps <sup>1)</sup>	32,893	51,034	44,127
Cross-currency swaps	224,900	281,016	224,873
<b>Total</b>	<b>2,242,793</b>	<b>2,526,168</b>	<b>2,454,000</b>

<sup>1)</sup> 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 <sup>1)</sup>

EUR 1 000	31 Mar 2023			31 Mar 2022			31 Dec 2022		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Interest rate swaps									
Cash flow hedges	194,270		194,270	74,910	-2,352	72,558	217,561		217,561
Fair value hedges		-23,789	-23,789	744	-1,310	-566		-26,404	-26,404
Non-hedges				1,011		1,011			
Forward foreign exchange contracts and swaps									
Cash flow hedges	6,860	-125	6,734	8,754		8,754	11,503	-431	11,072
Non-hedges	487	-73	414	343	-58	285	582	-173	409
Cross-currency swaps									
Non-hedges		-4,543	-4,543	6,532	-1,106	5,427		-13,576	-13,576
<b>Total</b>	<b>201,617</b>	<b>-28,531</b>	<b>173,086</b>	<b>92,295</b>	<b>-4,826</b>	<b>87,469</b>	<b>229,646</b>	<b>-40,584</b>	<b>189,061</b>

<sup>1)</sup> Cross-currency swaps related to Private Placements included.

## TVO Group debt structure by maturity

31 Mar 2023 EUR 1 000	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032-	Total
Loans from financial institutes	111,322	426,104	626,104	226,104	26,104	11,818		14,120			1,441,676
Public bonds		644,900	500,000	650,000	675,000	600,000		23,000		215,000	3,307,900
Loans from other sources											
Lease liabilities	1,437	2,314	44,009	406	406						48,571
Commercial papers	22,887										22,887
<b>Total</b>	<b>135,645</b>	<b>1,073,317</b>	<b>1,170,112</b>	<b>876,510</b>	<b>701,510</b>	<b>611,818</b>		<b>37,120</b>		<b>215,000</b>	<b>4,821,033</b>

## TVO Group credit commitment by maturity

31 Mar 2023 EUR 1 000	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032-	Total
Syndicated revolving credit facility			1,000,000								1,000,000
<b>Total</b>			<b>1,000,000</b>								<b>1,000,000</b>

EUR 75 million have been drawn from the EUR 1 000 million syndicated revolving credit facility.

The average interest rate on loans and derivatives on 31 March 2023 was 2.18 % (31 Dec 2022: 2.09 %).

On 31 March 2023, the Group had undrawn credit facilities amounting to EUR 925 million (2022: EUR 1,000 million). In addition, the Group had subordinated shareholder loan (hybrid equity) commitments totaling EUR 400 million (2022: EUR 400 million) and cash and cash equivalents amounting to EUR 169 million (2022: EUR 353 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

EUR 1 000	31 Mar 2023			31 Dec 2022		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>Financial assets at fair value</b>						
Derivative financial instruments at fair value through profit or loss		487			7,887	
Derivative financial instruments designated as cash flow hedges		201,129			83,664	
Derivative financial instruments designated as fair value hedges					744	
Investments in other shares <sup>1)</sup>			1,935			1,935
<b>Total</b>		<b>201,617</b>	<b>1,935</b>		<b>92,295</b>	<b>1,935</b>
<b>Financial liabilities at fair value</b>						
Derivative financial instruments at fair value through profit or loss		4,616			1,164	
Derivative financial instruments designated as cash flow hedges		125			2,352	
Derivative financial instruments designated as fair value hedges		23,789			1,310	
<b>Total</b>		<b>28,531</b>			<b>4,826</b>	

<sup>1)</sup> On 31 March 2023, TVO has unquoted shares worth EUR 1,935 (2022:1,935) 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 that do not qualify for hedge accounting are presented in the income statement.

## Book values of financial assets and liabilities by categories

EUR 1 000	31 Mar 2023			31 Dec 2022		
	Financial liabilities measured at amortised cost	Book value	Fair value	Financial liabilities measured at amortised cost	Book value	Fair value
<b>Non-current liabilities</b>						
Other financial liabilities <sup>1)</sup>	4,494,042	4,494,042	4,304,161	4,531,264	4,531,264	4,275,708

<sup>1)</sup> 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	31 Mar 2023	31 Mar 2022	31 Dec 2022
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	992,202	1,009,397	999,662
Provision related to nuclear waste management (non-current liabilities)	1,245,772	1,366,127	1,294,345

### 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	31 Mar 2023	31 Mar 2022	31 Dec 2022
Liability for nuclear waste management according to the Nuclear Energy Act	1,839,600	1,816,100	1,839,600
Funding target obligation	1,457,900	1,436,100	1,457,900
TVO's share in the Finnish State Nuclear Waste Management Fund	1,457,900	1,471,750	1,436,100
Difference between the liability and TVO's share of the Fund	381,700	344,350	403,500

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 total cost estimate based on a new nuclear waste management technical plan and schedule updated 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.

The updated cost estimate decreased the book value of property, plant and equipment related to decommissioning by EUR 71.8 million and also decreased the provision related to nuclear waste management by EUR 81.5 million compared with the value at the end of the previous year. The biggest changes due to the updated cost estimate in the income statement of the TVO Group are the increased expenses of EUR 15.7 million in materials and services. The overall effect on profit for the period was negative because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services, as the Nuclear Waste Management Fund is overfunded from an IFRS perspective. The negative profit impact of the updates and changes was mainly non-recurring.

During the period under review the production schedule was updated. Following the update the book value of property, plant and equipment related to decommissioning decreased by EUR 55.8 million and also the provision related to nuclear waste management decreased by EUR 48.6 million compared with the value at the end of the previous year. The overall effect on profit for the period is negative because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services, as the Nuclear Waste Management Fund is overfunded from an IFRS perspective. The negative profit impact of the updates and changes is mainly non-recurring.

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 2023, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee for 2022 at EUR 39.3 million, which TVO paid on 31 March 2023. In order to supplement the legal protected portion, TVO provided the Nuclear Waste Management Fund with a cash security of approximately EUR 43.7 million. The nuclear waste management fee for 2023 will be confirmed in March 2024.

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 2022, the Ministry of Economic Affairs and Employment (MEAE) set TVO's liability for nuclear waste management at EUR 1,839.6 (1,816.1) million for the end of 2022 and TVO's funding target in the Finnish State Nuclear Waste Management Fund for 2023 at EUR 1,457.9 (1,436.1) million. In addition, the MEAE has decided that the liability for 2023 is EUR 1,832.4 million, of which EUR 1,426.2 million belongs to OL1/OL2 and EUR 406.2 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 31 March 2023 is EUR 1,457.9 million. The carrying amount in the balance sheet is EUR 992.2 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 31 March 2023 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 31 March 2023 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	31 Mar 2023	31 Mar 2022	31 Dec 2022
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	727,500	651,339	651,339
Guarantees given by shareholders related to the nuclear waste management obligation	534,990	480,670	534,990

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	31 Mar 2023	31 Mar 2022	31 Dec 2022
OL1 and OL2	116,700	80,100	101,100
OL3	312,300	346,400	354,300
<b>Total</b>	<b>429,000</b>	<b>426,500</b>	<b>455,400</b>

### PENDING COURT CASES AND DISPUTES

Pending Court Cases and Disputes are to be found on [page 5](#).

