

INTERIM REPORT JANUARY-MARCH

2021



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Teollisuuden Voima Oyj's Interim Report January 1–March 31, 2021

During the first quarter of 2021, Teollisuuden Voima's (TVO) electricity generation at the Olkiluoto 1 (OL1) and Olkiluoto 2 (OL2) plant units continued safely and reliably.

The Radiation and Nuclear Safety Authority (STUK) granted a fuel loading permit for the Olkiluoto 3 EPR plant unit (OL3 EPR) on March 26, 2021. The fuel loading was started on March 27, 2021. According to the schedule TVO received from the plant supplier Areva–Siemens consortium in August 2020, the OL3 EPR plant unit will be connected to the grid in October 2021, and regular electricity production starts in February 2022.

The construction work at Posiva's encapsulation plant and final disposal facility has proceeded as planned.

The TVO Group has taken extensive measures to prevent the spread of coronavirus (COVID-19) infections. Despite of COVID-19 restrictions, work has been able to continue under special arrangements.

Operating Environment

The European Commission continues taxonomy criteria preparations for EU's Sustainable Finance. The Commission's Joint Research Center (JRC) completed its report on the taxonomy eligibility of nuclear power

in March 2021. The JRC's report does not find scientific grounds for excluding nuclear power from the Sustainable Finance Taxonomy. The report states that nuclear power does not cause any more harm to people's health or the environment than other electricity production methods which are already included in the Taxonomy. In addition, the report confirms that the emissions of nuclear power are comparable to those of water and wind power. The JRC's report will be evaluated by expert groups established under the Euratom Treaty and the Commission. The final decision on the taxonomy eligibility of nuclear power will be taken by the Commission at the end of 2021.

The EU Member States have agreed on a 55% emission reduction target compared to 1990 levels, on which the inter-institutional trilogue negotiations are still ongoing. In addition, the Member States have agreed on the Next Generation EU recovery package. Finland has tentatively outlined the use of EU Recovery Funding. In the preliminary plan, the majority of the funding, EUR 820 million, is aimed at solutions to reduce emissions.

Financial Performance

TVO operates on a cost-price principle (Mankala principle). The shareholders are charged incurred costs on 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 January 1–March 31, 2021 was EUR 78.9 (January 1–March 31, 2020: EUR 72.9) million.

The amount of electricity delivered to shareholders was 3,860.5 (3,869.5) GWh.

The consolidated profit/loss was EUR 17.6 (5.7) 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 relent to shareholders, totaled EUR 5,137.2 (December 31, 2020: 5,109.3) million, of which EUR 929.3 (929.3) million were subordinated shareholder loans. New long-term loans were not raised during the period under review (March 31, 2020: new

long-term loans were not raised), and non-current liabilities were repaid in the amount of EUR 172.9 (70.9) million.

By signing an amendment agreement on February 24, 2021, TVO agreed on changes to the EUR 1,300 million syndicated revolving credit facility signed in 2016. It was agreed that the maturity date of the EUR 1,000 million tranche was extended from 2023 to 2024 and the shorter, EUR 300 million tranche maturing 2022, was cancelled.

TVO has agreed that the maturities of bilateral bank loans totaling EUR 775 million have been extended from 2022 and 2023 to 2024.

The OL3 EPR project's share of financing costs has been capitalized 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 March 31, 2021, the amount of the loan was EUR 711.3 (December 31, 2020: 716.4) million and it has been relented to TVO's A-series shareholders. On March 31, 2021, the loan from the Finnish State Nuclear Waste Management Fund was decreased by EUR 5.1 (March 31, 2020: increased 125.0) million.

Olkiluoto 1 and Olkiluoto 2

The electricity production of the Olkiluoto nuclear power plant units OL1 and OL2 during the period under review was 3,866 (3,857) GWh. The total load factor was 100.0 (99.4)%.

The OL1 and OL2 plant units operated safely and reliably during the period under review. OL1's net production was 1,934 (1,905) GWh and the load factor 100.0 (98.2)%. OL2's net production was 1,933 (1,952) GWh and the load factor 100.0 (100.0)%.

The annual outages of the OL1 and OL2 plant units will begin as planned on April 25 and end on June 14, 2021. Every measure to prevent the spread of the COVID-19 pandemic to Olkiluoto will be implemented through planned procedures, COVID-19 tests, and instructions.

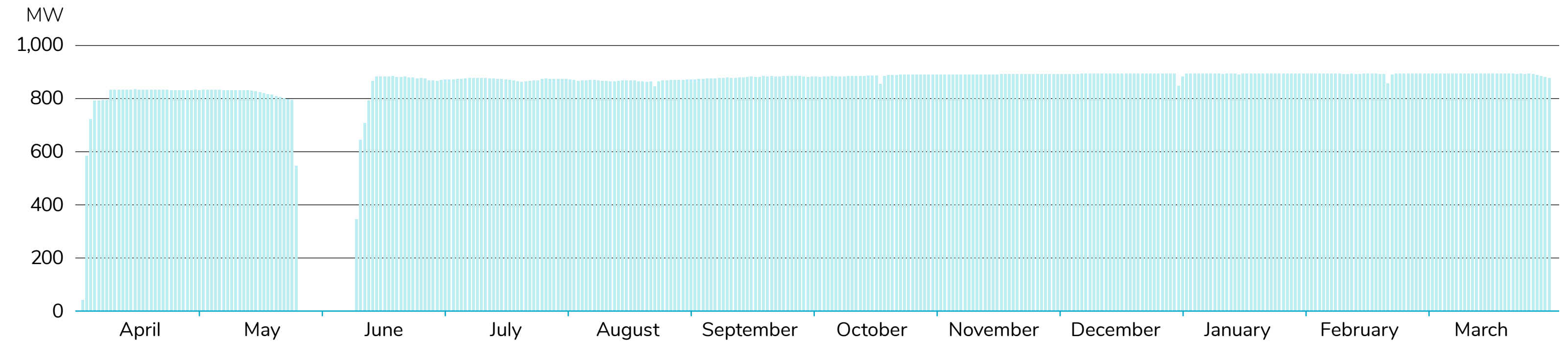
Olkiluoto 3 EPR

OL3 EPR, currently under construction, 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.

In March 2018, TVO signed a comprehensive settlement agreement with the plant supplier consortium companies Areva NP, Areva GmbH, and Siemens AG as well as with Areva Group parent company Areva

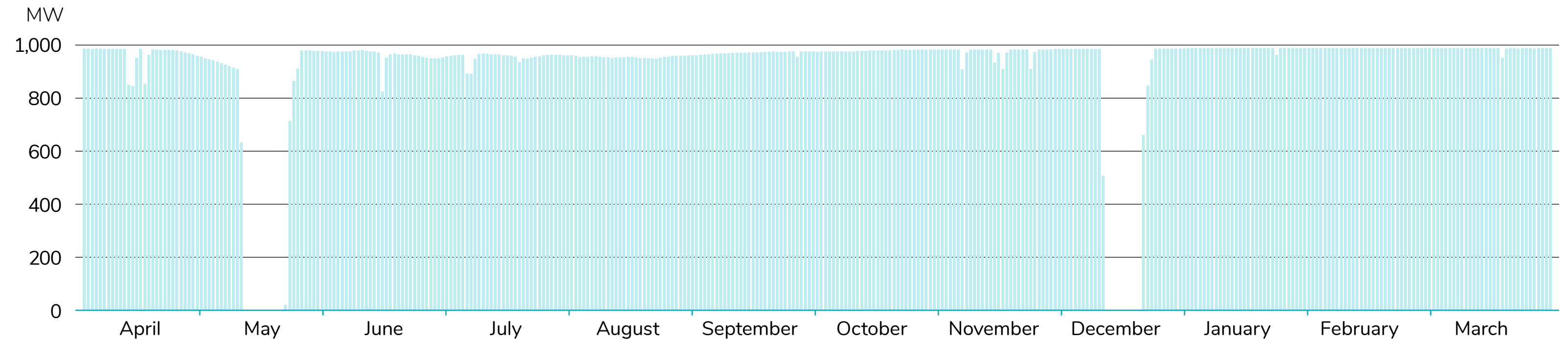
Olkiluoto 1

Average electrical power
April 1, 2020–March 31, 2021



Olkiluoto 2

Average electrical power
April 1, 2020–March 31, 2021



SA, a company wholly owned by the French State. The settlement agreement concerned the completion of the OL3 EPR project and related disputes, and it entered into force in late March 2018. The supplier consortium companies committed to ensuring that the funds dedicated to the completion of the OL3 EPR project will be adequate and will cover all applicable guarantee periods, including setting up a trust mechanism funded by Areva companies to secure the financing of the costs of completion of the OL3 EPR project. During the period under review, the trust has been replenished in accordance with the terms of the agreement. During the period under review, TVO has according to the comprehensive settlement agreement recognized receivables from the plant supplier which have accumulated as compensation until the end of the period under review. The compensation decreases the historical costs of property, plant, and equipment in the balance sheet.

The Radiation and Nuclear Safety Authority (STUK) granted a fuel loading permit for the OL3 EPR plant unit on March 26, 2021. The fuel loading was started on March 27, 2021. The beginning of fuel loading means that OL3 EPR is now a nuclear power plant in use. STUK states in its permit decision that the OL3 EPR plant unit fulfils the safety requirements set for it, and its safety and emergency preparedness arrangements and measures are sufficient in order to load fuel into the reactor. STUK also states that the necessary surveillance for preventing the spread of nuclear weapons is organized appropriately, and that the licensee's liability for a nuclear incident has been organized as stipulated.

According to the re-baseline schedule updated by the plant supplier in August 2020, the OL3 EPR plant unit will be connected to the grid in October 2021, and regular electricity production starts in February 2022. The Areva management is preparing a financial solution to complete the project until the end of the guarantee period. TVO

continues negotiations with the Areva–Siemens consortium on the terms for project completion.

At the end of the reporting period, the workforce at the construction site was approximately 1,600 people. Despite the COVID-19 pandemic, work at the OL3 EPR site has continued under special arrangements. The occupational safety at the site remained at a good level.

All realized costs of the OL3 EPR project that can be recognized in the cost of the asset have been entered as property, plant, and equipment in the Group balance sheet.

Nuclear Fuel

During the period under review, nuclear fuel purchases amounted to EUR 29.0 (31.7) million and the amount consumed to EUR 16.0 (15.5) million.

The nuclear fuel and uranium stock carrying value on March 31, 2021 was EUR 278.5 (December 31, 2020: 265.6) 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 1,025.4 (December 31, 2020: 1,029.5) million, calculated according to the international IFRS accounting principles. A corresponding amount, under assets, represents TVO's share in the Finnish State Nuclear Waste Management Fund.

In order to cover the 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 November 2020, the Ministry of Economic Affairs and Employment of Finland (MEAE) set TVO's liability for nuclear waste management at EUR 1,450.6 (1,471.4) million to the end of 2020 and TVO's funding target in the Finnish State Nuclear Waste Management Fund for 2021 at EUR 1,450.6 (1,471.4) million. In addition, the MEAE has decided that the liability for 2021 is EUR 1,755.7 million, of which EUR 1,394.2 million belongs to OL1/OL2 and EUR 361.5 million belongs to OL3 EPR.

In March 2021, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee refund for 2020 at EUR 28.7 (refund 42.3) million, which the Fund reimbursed to TVO on March 31, 2021 (reimbursed by the Fund on March 31, 2020). The nuclear waste management fee for 2021 will be confirmed in March 2022.

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 (Olkiluoto NPP) and Fortum (Loviisa NPP).

Work at Posiva's encapsulation plant site and final disposal facility at ONKALO has progressed despite of measures to prevent the spread of COVID-19 infections. Detailed planning of the plant systems has continued with the preparation of construction plans for safety-classified systems and their processing by the authorities. The supplier selection for key equipment of the encapsulation plant is mostly done, and the design and manufacturing of equipment is progressing.

Acquisitions of Tangible and Intangible Assets and Shares

Investments during the period under review were EUR -10.7 (14.2) million. Investments of the parent company were EUR -11.2 (12.2) million, of which EUR -20.8 (5.2) million were allocated to the OL3 EPR project. The OL3 EPR investment is decreased by the additional compensation in accordance with the Global Settlement Agreement (GSA), which has been recorded as EUR 78.0 million for the review period. The additional compensation in accordance with the GSA has been recorded as EUR 318.0 million in total.

During the review period, there were no purchases of carbon dioxide emission rights (EUR 0.3 million).

Pending Court Cases and Disputes

TVO and Wärtsilä Finland Oy (Wärtsilä) signed an agreement on the delivery of Emergency Diesel Generators and their auxiliary systems to Olkiluoto nuclear power plant (the so-called EDG project) in 2013. In December 2018, Wärtsilä published a stock exchange release announcing a major provision it has made on two nuclear power plant projects to cover the cost exceedings and project delays, and that the allocation of responsibility for the additional costs and delays is in dispute. In April 2019, Wärtsilä announced in its notification addressed to TVO that EUR 65.0 million of the provision applies to TVO's EDG project. In October 2020, TVO initiated arbitration proceedings against Wärtsilä concerning the installation and commissioning schedule of the auxiliary diesel generators (EDG 1–8) in accordance with the EDG project's delivery agreement. The allocation of responsibility between the parties concerning the abovementioned additional costs and delays are to be resolved in the same proceedings. The arbitration proceedings are still ongoing.

Personnel

The total number of personnel in the Group at the end of the period under review was 990 (December 31, 2020: 975, March 31, 2020: 966). The number of permanent employees in the Group at the end of the period under review was 973 (December 31, 2020: 956, March 31, 2020: 940).

Annual General Meeting

TVO's Annual General Meeting on March 31, 2021 approved the financial statements for 2020, confirmed the consolidated income statement and balance sheet, and discharged the members of the Board of Directors and the President and CEO from liability.

Hannu Jokinen and Petra Lundström were elected as a new Board members, replacing Risto Andsten and Markus Rauramo. Other Board members were re-elected. At its organization meeting, the Board elected Ilkka Tykkyläinen as Chairman and Tiina Tuomela as Deputy Chairman. The Board also chose from among its members the members and chairmen 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 2020 Report of the Board of Directors.

The OL3 EPR plant unit's fuel was loaded into the reactor in March 2021. According to the re-baseline schedule updated by the plant

supplier in August 2020, the OL3 EPR plant unit will be connected to the grid in October 2021, and regular electricity production starts in February 2022. The Areva management is preparing a financial solution to complete the project until the end of the guarantee period. TVO continues negotiations with the plant supplier Areva–Siemens consortium on the terms for project completion.

Divergent procedures due to the COVID-19 pandemic have been continued at Olkiluoto. The Group is constantly assessing the situation, and its guidelines and practices comply with the guidelines and decisions of the Finnish Institute for Health and Welfare (THL) and the Finnish Government. Changes in the situation of the pandemic either globally or locally may cause divergent arrangements in the Group's operations also throughout the rest of the year. The TVO Group has a COVID-19 pandemic contingency plan in place that outlines step-by-step operating measures needed to prevent the spread of a pandemic. The objective of the pandemic preparedness plan is to prevent the COVID-19 virus from spreading to Olkiluoto and stop the virus from spreading in the Olkiluoto area if needed.

The annual outages of the OL1 and OL2 plant units will begin as planned on April 25 and end on June 14, 2021. Every measure to prevent the spread of the COVID-19 pandemic to Olkiluoto will be implemented through planned procedures, COVID-19 tests, and instructions.

Assessment of Year-End Developments

In the current financial year, despite the effects of the COVID-19 pandemic, electricity production is expected to continue as in previous years. The prerequisites for nuclear power production at Olkiluoto are good. Nuclear fuel availability is guaranteed by long-term agreements.

Preparing the OL3 EPR plant unit for production will be continued. After fuel loading, maintenance and finalization work as well as tests will be continued. The most important upcoming test is the hot functional test, in which the reactor and turbine island is tested for use. During testing, dozens of separate tests are performed with different pressure and temperature levels. TVO will continue to support the plant supplier in completing the project. TVO continues negotiations with the plant supplier Areva–Siemens consortium on the terms of the OL3 EPR project completion.

Posiva continues the implementation of the final disposal plant project. The excavation work and technical acquisitions at the final disposal facility are progressing. Building and installation work as well as the qualification and production of equipment is taking place at the encapsulation plant. The preparation for the operating licence application continues.

The COVID-19 pandemic can cause uncertainty towards the end of the year and divergent arrangements in the Group's operations throughout the rest of the year.

Events after the Period under Review

The fuel loading of the OL3 EPR plant unit was completed on April 1, 2021.

The credit rating agency S&P Global Ratings (S&P) affirmed on April 1, 2021 its long-term credit rating "BB" for Teollisuuden Voima Oyj, and changed the outlook from negative to positive. According to S&P, the completion of fuel loading at the OL3 EPR plant unit is a significant sign of progress on the project.

April 22, 2021

Teollisuuden Voima Oyj
Board of Directors

Key Figures of TVO Group

TVO Group (IFRS) (M€)	Q1 2021	Q1 2020	Q1-Q4 2020
Turnover	79	73	275
Profit/loss for the period	18	6	0
Investments ¹⁾	-11	14	56
Equity	2,081	1,820	2,043
Subordinated shareholder loans (hybrid equity) (included in the former) ³⁾	929	679	929
Non-current and current interest-bearing liabilities (excluding loan from VYR) ²⁾	4,285	4,316	4,281
Loan from VYR ²⁾	711	716	716
Provision related to nuclear waste management	1,025	1,038	1,030
Balance sheet total	8,204	7,998	8,181
Equity ratio % ⁴⁾	32.2	29.2	31.7
Average number of personnel	983	957	984

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

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

Key Figures of Teollisuuden Voima Oyj

Teollisuuden Voima Oyj (FAS) (M€)

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

	Q1 2021	Q1 2020	Q1-Q4 2020
Turnover	78	72	271
Profit/loss before appropriations	19	7	8
Fuel costs	16	16	64
Nuclear waste management costs	0	7	28
Capital expenditure (depreciation and financial income and expenses)	9	10	34
Investments ¹⁾	-11	12	52
Equity	861	857	861
Appropriations	216	200	197
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) ²⁾	4,208	4,225	4,180
Loans from equity holders of the company ³⁾	929	679	929
Loan from VYR ²⁾	711	716	716
Balance sheet total	7,027	6,785	6,995
Equity ratio % ⁴⁾	31.8	28.6	31.7
Average number of personnel	981	956	983

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 % = $100 \times \frac{\text{equity} + \text{appropriations} + \text{loans from equity holders of the company}}{\text{balance sheet total} - \text{loan from the Finnish State Nuclear Waste Management Fund}}$

Electricity delivered to equity holders of the company (GWh)	Q1 2021	Q1 2020	Q1-Q4 2020
Nuclear power	3,861	3,850	14,563
Coal-fired power	0	19	82
Total	3,861	3,869	14,645

Consolidated financial statement in brief and notes

Consolidated income statement

EUR 1,000	Q1 2021	Q1 2020	Q1-Q4 2020
Turnover	78,883	72,945	275,120
Work performed for own purposes	7,535	5,384	21,217
Other income	3,600	3,217	13,253
Materials and services	-10,977	-17,826	-78,230
Personnel expenses	-19,844	-16,566	-72,493
Depreciation and impairment charges	-10,833	-11,248	-45,461
Other expenses	-22,120	-22,074	-86,183
Operating profit/loss	26,244	13,832	27,223
Finance income	3,160	2,898	11,616
Finance expenses	-11,996	-11,124	-39,517
Total finance income and expenses	-8,836	-8,226	-27,901
Share of the profit/loss of joint ventures	216	78	1,132
Profit/loss before income tax	17,624	5,684	454
Profit/loss for the period	17,624	5,684	454
Profit/loss for the period attributable to:			
Equity holders of the company	17,624	5,684	454

Consolidated statement of comprehensive income

EUR 1,000	Q1 2021	Q1 2020	Q1-Q4 2020
Profit/loss for the period	17,624	5,684	454
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges	21,402	-3,680	-21,994
Total other comprehensive profit/loss items for the period	21,402	-3,680	-21,994
Total comprehensive profit/loss for the period	39,026	2,004	-21,540
Total comprehensive profit/loss for the period attributable to:			
Equity holders of the company	39,026	2,004	-21,540

Consolidated statement of financial position

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Assets			
Non-current assets			
Property, plant and equipment	5,640,687	5,664,992	5,664,650
Intangible assets	2,560	5,896	2,589
Loans and other receivables	714,106	779,373	959,286
Investments in joint ventures	4,451	7,452	4,236
Investments in shares	1,934	1,934	1,934
Derivative financial instruments	29,930	24,890	28,516
Share in the Finnish State Nuclear Waste Management Fund	1,025,366	1,038,026	1,029,522
Total non-current assets	7,419,034	7,522,563	7,690,733
Current assets			
Inventories	287,228	286,266	274,215
Trade and other receivables	352,278	24,996	52,231
Derivative financial instruments	2,827	17,377	2,515
Cash and cash equivalents	142,326	146,664	161,363
Total current assets	784,659	475,303	490,324
Total assets	8,203,693	7,997,866	8,181,057
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
Reserve for invested non-restricted equity	0	3	0
Fair value and other reserves	-5,970	-9,058	-27,372
Subordinated shareholder loans (hybrid equity)	929,300	679,300	929,300
Retained earnings	314,729	307,316	298,272
Total equity	2,080,807	1,820,309	2,042,948

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	1,025,366	1,038,026	1,029,522
Loan from the Finnish State Nuclear Waste Management Fund	711,266	716,447	716,447
Bonds	2,613,372	2,688,081	2,720,218
Other financial liabilities	1,073,709	1,019,899	1,092,051
Derivative financial instruments	26,593	50,501	40,413
Total non-current liabilities	5,450,306	5,512,954	5,598,651
Current liabilities			
Current financial liabilities	570,714	545,027	427,211
Derivative financial instruments	881	12,245	1,598
Advance payments received	19,788	17,790	19,789
Trade payables	13,079	18,372	8,330
Other current liabilities	68,118	71,169	82,530
Total current liabilities	672,580	664,603	539,458
Total liabilities	6,122,886	6,177,557	6,138,109
Total equity and liabilities	8,203,693	7,997,866	8,181,057

Consolidated statement of changes in equity

EUR 1,000	Share capital	Share premium reserve and statutory reserve	Reserve for invested non-restricted equity	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2021	600,365	242,383	0	-27,372	929,300	298,272	2,042,948	2,042,948
Profit/loss for the period	0	0	0	0	0	17,624	17,624	17,624
Other comprehensive profit/loss items:								
Cash flow hedges	0	0	0	21,402	0	0	21,402	21,402
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-1,167	-1,167	-1,167
Equity 31 Mar 2021	600,365	242,383	0	-5,970	929,300	314,729	2,080,807	2,080,807
EUR 1,000	Share capital	Share premium reserve and statutory reserve	Reserve for invested non-restricted equity	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2020	600,365	242,383	3	-5,378	679,300	302,724	1,819,397	1,819,397
Profit/loss for the period	0	0	0	0	0	5,684	5,684	5,684
Other comprehensive profit/loss items:								
Cash flow hedges	0	0	0	-3,680	0	0	-3,680	-3,680
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-1,092	-1,092	-1,092
Equity 31 Mar 2020	600,365	242,383	3	-9,058	679,300	307,316	1,820,309	1,820,309
EUR 1,000	Share capital	Share premium reserve and statutory reserve	Reserve for invested non-restricted equity	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1 Jan 2020	600,365	242,383	3	-5,378	679,300	302,724	1,819,397	1,819,397
Profit/loss for the financial year	0	0	0	0	0	454	454	454
Other comprehensive profit/loss items:								
Cash flow hedges	0	0	0	-21,994	0	0	-21,994	-21,994
Subordinated shareholder loans (hybrid equity)	0	0	0	0	250,000	0	250,000	250,000
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-4,906	-4,906	-4,906
Acquisition of own shares	0	0	-3	0	0	0	-3	-3
Equity 31 Dec 2020	600,365	242,383	0	-27,372	929,300	298,272	2,042,948	2,042,948

Consolidated statement of cash flows

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Operating activities			
Profit/loss for the period	17,624	5,684	454
Adjustments:			
Finance income and expenses	8,835	8,226	27,901
Depreciation and impairment charges	10,833	11,248	45,461
Share of the profit/loss of joint ventures	-216	-78	-1,132
Other non-cash flow income and expenses	-8,325	-8,527	-29,268
Sales profit/loss of property, plant and equipment and shares	0	-51	-51
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	14,006	46,030	21,527
Increase (-) or decrease (+) in inventories	-13,000	-16,376	-4,465
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	8,713	5,164	-9,191
Interest paid and other finance expenses	-1,245	-953	-3,896
Dividends received	0	0	4,270
Interest received	3,786	3,149	3,217
Cash flow from operating activities	41,011	53,516	54,827
Investing activities			
Acquisition of property, plant and equipment	-86,357	-81,858	-273,590
Proceeds from sale of property, plant and equipment	0	127	127
Acquisition of intangible assets	-73	-31	-741
Loan receivables granted	0	-125,005	-125,138
Repayments of loans granted	5,180	0	240
Cash flow from investing activities	-81,250	-206,767	-399,102

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Financing activities			
Acquisition of own shares	0	0	-3
Withdrawals of subordinated shareholder loans (hybrid equity)	0	0	250,000
Withdrawals of long-term loans	0	125,005	228,715
Repayment of long-term loans	-178,047	-70,945	-255,481
Principal elements of lease payments	-960	-950	-2,052
Interest paid of subordinated shareholder loans (hybrid equity)	-553	-589	-4,818
Increase (-) or decrease (+) in interest-bearing receivables	0	-3,950	2,030
Increase (+) or decrease (-) in current financial liabilities	262,552	13,512	349,415
Repayment of current financial liabilities	-61,790	0	-300,000
Cash flow from financing activities	21,202	62,083	267,806
Change in cash and cash equivalents	-19,037	-91,168	-76,469
Cash and cash equivalents at the beginning of period	161,363	237,832	237,832
Cash and cash equivalents at the end of period	142,326	146,664	161,363

Notes to the Interim Report

Accounting policies

The interim financial statements have been prepared in accordance with 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 December 31, 2020. Additionally the changes according to the revised IAS/IFRS standards have been adopted. The coronaviruspandemic has not affected materially accounting policies nor reporting numbers.

Management's critical accounting estimates and assumptions

The preparation of Interim Report requires 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 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 December 31, 2020.

Olkiluoto 3 EPR

TVO's management has estimated that TVO is entitled to receive the compensation of EUR 400 million agreed in the comprehensive settlement agreement from Plant Supplier assuming that the start of regular electricity production of the OL3 EPR nuclear power plant unit will take place in February 2022. During the period under review TVO has recognized current receivables EUR 318 million amounted to the accumulated compensation to the end of the period under review agreed in the comprehensive settlement agreement from Plant Supplier. The compensation decreases the historical costs of property, plant and equipment in the balance sheet.

Segment reporting

Segment structure in TVO

The Group has one reportable segment; nuclear power.

The electricity of the nuclear power segment is produced at two nuclear power plant units, Olkiluoto 1 and Olkiluoto 2 (OL1 and OL2). A new unit, Olkiluoto 3 (OL3), is under construction at Olkiluoto. The subsidiary of TVO, TVO Nuclear Services Oy (TVONS), of which operation is related to nuclear power, is also included in the nuclear power segment.

The electricity of coal-fired power segment was produced in 2020 by TVO share at the Meri-Pori coal-fired power plant. Fortum used TVO's share of the Meri-Pori capacity as of the beginning of 2019. TVO renounced its share of Meri-Pori's capacity in the beginning of July 2020 and acquired all the C-series shares it owns. All the C-series shares have been cancelled in July 2020.

Segment calculation principles

TVO Group discloses in the segment information; turnover, profit/loss for the period and assets, which the chief operation decision maker follows.

The chief operation decision maker follows reporting according to Finnish Accounting Standards (FAS). Adjustments made under IFRS accounting policies are reported in Group level.

Turnover by segments

EUR 1,000	Q1 2021	Q1 2020	Q1-Q4 2020
Nuclear power	78,883	71,188	269,308
Coal-fired power	0	1,757	5,812
Total	78,883	72,945	275,120

Profit/loss for the period by segments

EUR 1,000	Q1 2021	Q1 2020	Q1-Q4 2020
Nuclear power	19,510	6,881	8,560
Coal-fired power	0	0	0
Profit/loss before appropriations (FAS)	19,510	6,881	8,560
The impact of the nuclear waste management obligation	-1,578	-1,582	-5,962
The impact of financial instruments	-641	135	338
Other IFRS adjustments	117	172	656
Share of the profit/loss of joint ventures	216	78	-3,138
Total (IFRS)	17,624	5,684	454

Assets by segments

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Nuclear power	7,027,431	6,779,923	6,995,740
Coal-fired power	0	4,875	0
Total (FAS)	7,027,431	6,784,798	6,995,740
The impact of the nuclear waste management obligation	1,151,234	1,169,851	1,156,968
The impact of financial instruments	4,086	13,288	6,586
The impact of finance leases	49,701	51,440	49,701
Other IFRS adjustments	-32,199	-27,952	-31,163
Share of the profit/loss of joint ventures	3,440	6,441	3,225
Total (IFRS)	8,203,693	7,997,866	8,181,057

Property, plant and equipment and intangible assets

Changes in property, plant and equipment

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Opening net book amount	5,664,650	5,663,306	5,663,306
Increase	-10,802	14,154	53,413
Decrease	-2,431	-1,317	-16,163
Depreciation and impairment charges	-10,731	-11,151	-45,048
Accumulated depreciation from deduction	0	0	9,142
Closing net book amount	5,640,686	5,664,992	5,664,650

Changes in intangible assets

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Opening net book amount	2,589	5,961	5,961
Increase	73	32	2,483
Decrease	0	0	-5,715
Depreciation and impairment charges	-102	-97	-413
Accumulated depreciation from deduction	0	0	273
Closing net book amount	2,560	5,896	2,589

The OL3 EPR investment is decreased by the additional compensation in accordance with the Global Settlement Agreement (GSA), which has been recorded as EUR 78.0 million for the review period. The additional compensation in accordance with the GSA has been recorded as EUR 318.0 million in total.

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 2020.

Derivative financial instruments

Nominal values of the derivative financial instruments

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
Interest rate swaps	1,824,117	1,815,126	2,024,117
Forward foreign exchange contracts and swaps ¹⁾	70,023	89,467	85,753
Cross-currency swaps	378,577	518,701	378,585
Total	2,272,717	2,423,294	2,488,455

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⁾

EUR 1,000	31 Mar 2021			31 Mar 2020			31 Dec 2020		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Interest rate swaps									
Cash flow hedges	7,276	-21,677	-14,401	461	-25,716	-25,255	114	-33,763	-33,649
Fair value hedges	8,838		8,838	12,305		12,305	10,709		10,709
Non-hedges		-5,488	-5,488		-6,099	-6,099		-6,460	-6,460
Forward foreign exchange contracts and swaps									
Cash flow hedges	8,329	-82	8,247	15,821	-81	15,741	7,324	-1,218	6,106
Non-hedges	1,011	-226	785	1,228	-13	1,215	1,497	-71	1,426
Cross-currency swaps									
Non-hedges	7,304		7,304	12,451	-30,838	-18,386	11,387	-499	10,888
Total	32,757	-27,474	5,283	42,267	-62,747	-20,479	31,031	-42,011	-10,980

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

TVO Group debt structure by maturity

31 Mar 2021

EUR 1,000	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-	Total
Loans from financial institutes	155,413	46,618	50,608	801,104	26,104	26,104	26,104	11,818			1,143,873
Public bonds		250,561	500,000	644,900	500,000	650,000	75,000			88,000	2,708,461
Loans from other sources		56,117									56,117
Lease liabilities	1,006	2,104	2,103	1,845	43,548						50,606
Commercial papers	260,615	38,806									299,422
Total	417,035	394,206	552,711	1,447,849	569,652	676,104	101,104	11,818	0	88,000	4,258,478

TVO Group credit commitment by maturity

31 Mar 2021

EUR 1,000	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030-	Total
Syndicated revolving credit facility				1,000							1,000
Bilateral revolving credit facility											
Bilateral bank loan											
Total				1,000							1,000

EUR 125 million has been drawn from the EUR 1,000 million syndicated revolving credit facility.

The average interest rate on loans and derivatives on 31 March 2021 was 1.54 % (31 Dec 2020: 1.56 %).

On March 31, 2021 the Group had undrawn credit facilities amounting to EUR 875 million (2020: EUR 1,270 million). In addition, the Group had subordinated shareholder loan (hybrid equity) commitments totaling EUR 400 million (2020: EUR 400 million) and cash and cash equivalents amounting to EUR 142 million (2020: EUR 161 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 2021		
	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments at fair value through profit or loss		8,315	
Derivative financial instruments designated as cash flow hedges		15,605	
Derivative financial instruments designated as fair value hedges		8,838	
Investments in other shares ¹⁾			1,934
Total		32,757	1,934
Financial liabilities at fair value			
Derivative financial instruments at fair value through profit or loss		5,714	
Derivative financial instruments designated as cash flow hedges		21,759	
Total		27,474	

¹⁾ On March, 31 2021 TVO has unquoted shares worth EUR 1,934 (2020:1,934) thousand. Direct market prices are not available for unquoted shares and therefore their fair value is determined using methods based on management judgement.

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

EUR 1,000	31 Dec 2020		
	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments at fair value through profit or loss		12,884	
Derivative financial instruments designated as cash flow hedges		7,438	
Derivative financial instruments designated as fair value hedges		10,709	
Investments in other shares ¹⁾			1,934
Total		31,031	1,934
Financial liabilities at fair value			
Derivative financial instruments at fair value through profit or loss		7,030	
Derivative financial instruments designated as cash flow hedges		34,981	
Total		42,011	

Fair value estimation

The derivative financial instruments are initially recognized 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 recognized 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 2021		
	Financial liabilities measured at amortized cost	Book Value	Fair value
Non-current liabilities			
Other financial liabilities ¹⁾	3,687,081	3,687,081	3,774,867

Book values of financial assets and liabilities by categories

EUR 1,000	31 Dec 2020		
	Financial liabilities measured at amortized cost	Book Value	Fair value
Non-current liabilities			
Other financial liabilities ¹⁾	3,812,269	3,812,269	3,863,422

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	31 Mar 2021	31 Mar 2020	31 Dec 2020
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	1,025,366	1,038,026	1,029,522
Provision related to nuclear waste management (non-current liabilities)	1,025,366	1,038,026	1,029,522

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 2021	31 Mar 2020	31 Dec 2020
Liability for nuclear waste management according to the Nuclear Energy Act	1,450,600	1,471,400	1,450,600
Funding target obligation	1,450,600	1,471,400	1,450,600
TVO's share in the Finnish State Nuclear Waste Management Fund	1,450,600	1,471,400	1,478,800
Difference between the liability and TVO's share of the fund	0	0	-28,200

The costs of decommissioning of 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.

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. The difference between the funding obligation target decided by the Ministry of Economic Affairs and Employment (MEAE) and TVO's actual share of the Finnish State Nuclear Waste Management Fund is paid in Q1 each year. The nuclear waste management liability of TVO is lower in the end of 2020 than in the previous year based on the decrease of nuclear waste management's total cost estimate updated every three years. Thus, assets refunded in March 2021 from the Nuclear Waste Management Fund to TVO in respect of 2020 according to the rules of the Fund. Assets from the Nuclear Waste Management Fund is estimated to refund to TVO also in respect of 2021.

The MEAE has decided that the nuclear waste management liability for 2021 is EUR 1,755.7 million, of which EUR 1,394.2 million belongs to OL1/OL2 and EUR 361.5 million belongs to OL3 EPR. The calculation according to IAS 37 for the OL3 EPR plant unit's nuclear waste management liability is started and the related provision is recorded in the balance sheet once the plant unit achieves criticality and operations which produce nuclear waste begin. Once the plant unit achieves criticality, the plant unit is contaminated, which commences a constructive obligation (a cleansing obligation). According to the schedule, the first criticality of the OL3 EPR plant unit will be in autumn 2021.

TVO's share in the Finnish State Nuclear Waste Management Fund on March 31, 2021 is EUR 1,450.6 million. The carrying amount in the balance sheet is EUR 1,025.4 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 actual value of the fund increases more than the provision.

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 2021	31 Mar 2020	31 Dec 2020
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	711,266	716,447	716,447
Guarantees given by shareholders related to the nuclear waste management obligation	493,530	77,980	95,880

According to the Nuclear Energy Act 44 §, the company liable for nuclear waste management must assign securities to the state according to the terms stipulated by 45 § before operations which produce waste are initiated, and otherwise at the end of each June. The Ministry of Economic Affairs and Employment has accepted TVO's shareholder companies' absolute guarantees as securities to be assigned to the state once the OL3 EPR plant unit begins operations.

Investment commitments

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

EUR 1,000	31 Mar 2021	31 Mar 2020	31 Dec 2020
OL1 and OL2	99,100	78,700	88,600
OL3	411,800	443,000	433,900
Total	510,900	521,700	522,500

Pending Court Cases and Disputes

Pending Court Cases and Disputes are to be found on page 6.