

INTERIM REPORT JANUARY-MARCH

2020

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Teollisuuden Voima Oyj's Interim Report January 1–March 31, 2020

TEOLLISUUDEN VOIMA'S (TVO) electricity generation at the Olkiluoto 1 and Olkiluoto 2 plant units continued safely and reliably throughout the first quarter of 2020. The installation of the electrical systems, the instrumentation and control system (I&C), and the mechanical systems are continued at the site as the plant unit is prepared for the loading of nuclear fuel. The construction works of Posiva's final disposal facility proceeded as planned. TVO Group has taken extensive measures to prevent the spread of coronavirus (COVID-19) infections.

Operating Environment

The EU continues to work on the sustainable investment package. The compromise proposal on the taxonomy was adopted in the Economic and Monetary Affairs Committee (ECON) and the Environment Committee (ENVI) of the European Parliament in January. The Parliament will vote next on the compromise proposal. The legislative procedure of sustainable financing is going forward in the Commission. Nuclear power is not excluded from the taxonomy, but more extensive work needs to be done, especially concerning nuclear waste.

The crisis caused by the COVID-19 coronavirus pandemic has overtaken the Commission's 2020 Work Programme and ambitious climate targets in Commission decision-making for now.

Financial Performance

TVO operates on a cost-price principle (Mankala principle). TVO's goal is not to make profit or pay dividends. 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 made any use of their share of the output or not. Because of the Company's operating principle, key indicators based on financial performance will not be presented.

The consolidated turnover for the period under review January 1–March 31, 2020 was EUR 72.9 (January 1–March 31, 2019: EUR 87.1) million. In the period under review, the fixed charge to shareholders was lower than the previous year's due to the nuclear waste management fee. The amount of electricity delivered to shareholders was 3,869.5 (3,968.6) GWh. The slight decrease in electricity delivered to shareholders is due to a lower amount of delivery of the Meri-Pori coal-fired power plant compared to last year.

The consolidated profit/loss was EUR 5.7 (2.0) 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 under review, excluding the loan from the Finnish State Nuclear Waste Management Fund relented to shareholders, totalled EUR 4,904.2 (December 31, 2019: 4,961.6) million, of which EUR 679.3 (679.3) million were subordinated shareholder loans. New long-term loans were not raised during the review period (EUR 100.0 million), and EUR 70.9 million (293.5) was repaid.

The company has a syndicated revolving credit facility amounting to a total of EUR 1,300 million in two tranches. The first tranche of EUR 1,000 million matures in 2023, and the second tranche of EUR 300 million matures in 2022. During the period under review, TVO obtained a new three-year bilateral bank loan of EUR 100 million. In addition, the maturity date of a bilateral bank loan of EUR 100 million was extended from 2022 to 2023.

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, 2020 the amount of the loan was EUR 716.4 (December 31, 2019: 591.4) million and it has been relented to the Company's A-series shareholders. On 31 March 2020, the loan from the Finnish State Nuclear Waste Management Fund was increased by EUR 125.0 (March 29, 2019 decreased by 74.8) million.

Nuclear Power

Olkiluoto 1 and Olkiluoto 2

The electricity production of the Olkiluoto power plant units Olkiluoto 1 (OL1) and Olkiluoto 2 (OL2) during the period under review was 3,857 (3,838) GWh. The total load factor was 99.4 (100.0)%.

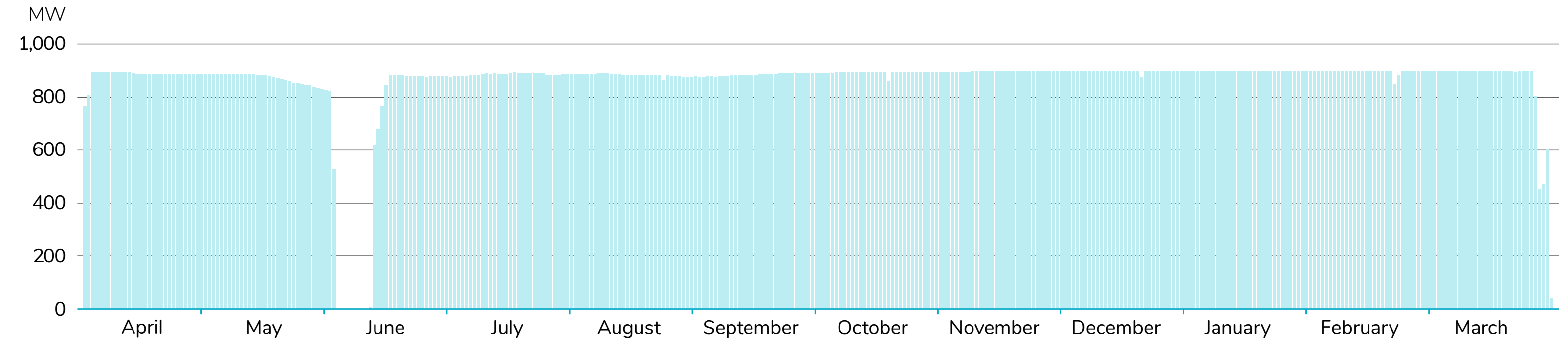
The plant units operated safely and reliably during the period under review. OL1's net production was 1,905 (1,914) GWh and load factor 98.2 (99.9)%. OL2's net production was 1,952 (1,924) GWh and load factor 100.0 (100.0)%.

Technical deviations have been detected in the fuel elements at Olkiluoto 1 on 27 March 2020, which is why fuel calculations were conducted at the plant unit to explain the deviations at reduced power. The fuel supplier has detected deficiencies in its operations and estimates that some 20 fuel elements out of 500 may contain technical deviations. On the International Nuclear and Radiological Event Scale (INES)*, the event was classified into category 1, indicating that it is an abnormal event affecting safety. Based on the fuel calculations the situation does not compromise nuclear safety but the operation of the plant unit will continue at a power level of about 90–95 percent until the annual outage.

*The Nuclear and Radiological Event Scale (INES) of the International Atomic Energy Agency is used to communicate the classification of nuclear and radiological events. The INES scale has seven categories of severity. Category 4–7 events are classified as accidents, category 1–3 events as incidents or anomalies with a negative effect on safety, and category 0 events as deviations with no safety significance. For more information: <https://www.stuk.fi/web/en/topics/emergencies/the-international-nuclear-and-radiological-event-scale-ines>

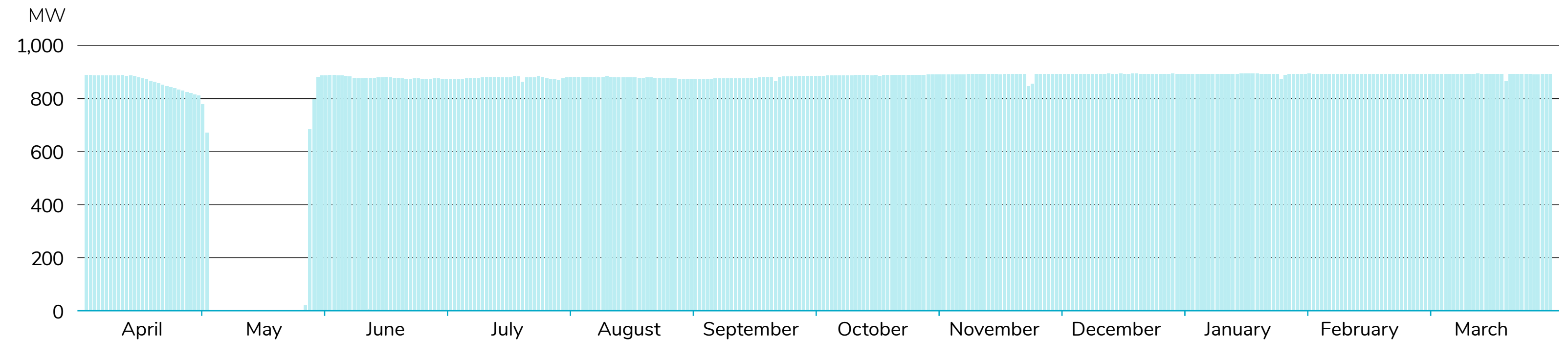
Olkiluoto 1

Average electrical power
April 1, 2019–March 31, 2020



Olkiluoto 2

Average electrical power
April 1, 2019–March 31, 2020



The Olkiluoto 1 power plant unit was disconnected from electricity production on account of reactor side valve repairs. The plant unit's ramp down to cold shutdown began on 31 March 2020, and it was reconnected to the grid on 1 April 2020. Repair of the valve defect does not impact nuclear safety.

To minimize the potential impact of the corona pandemic, it was decided to carry out the annual outage of the Olkiluoto 1 power plant unit this year for 14 days instead of the previously planned 25 days. At the Olkiluoto 2 plant unit, the 8-day fuel replacement outage will be carried out as planned.

Olkiluoto 3 EPR

Olkiluoto 3 EPR (OL3 EPR), currently under construction, was procured as a fixed-price turnkey project from a consortium (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 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 undertook 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 recognized receivables 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.

The work at OL3 has not progressed exactly as planned. The construction engineering work at the plant unit is mostly complete. Electrical, automation and mechanical installations are still partly ongoing.

In March 2019, the Government issued an operating licence for the plant unit. At the end of the reporting period, the workforce at site the was about 1,500 persons. 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 31.7 (22.2) million and the amount consumed to EUR 15.5 (14.8) million.

The nuclear fuel and uranium stock carrying value on March 31, 2020 was EUR 278.1 (December 31, 2019: 261.9) million.

Nuclear Waste Management

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

The liabilities in the consolidated financial statements show a provision related to the nuclear waste management liability of EUR 1,038.0 (December 31, 2019: 1,040.8) million, calculated according to the international IFRS accounting principles. A corresponding amount, under assets, represents the Company'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 as laid down in the Finnish Nuclear Energy Act. In November 2019, the Ministry of Economic Affairs and Employment of Finland (MEAE) set TVO's liability for nuclear waste management at the end of 2019 at EUR 1,471.4 (1,505.8) million and the Company's funding target in the Finnish State Nuclear Waste Management Fund for 2020 at EUR 1,471.4 (1,505.8) million.

In March 2020, the Finnish State Nuclear Waste Management Fund confirmed TVO's nuclear waste management fee refund for 2019 at EUR -42.3 (payment into the Fund 26.7) million, which the Fund reimbursed to TVO on March 31, 2020 (paid into the Fund on March 29, 2019). The nuclear waste management fee for 2020 will be confirmed in March 2021.

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).

At the end of March, Posiva will start further excavation of the central tunnels and excavation works on the first five deposition tunnels in ONKALO. Construction and building engineering works will also continue at the final disposal plant, including construction engineering work and HVAC for the technical rooms and vehicle connections.

The construction work on the encapsulation plant has progressed well. 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.

Posiva's owners provided the nuclear waste management Annual Report for 2019 to the Ministry of Economic Affairs and Employment in late March.

Coal Power

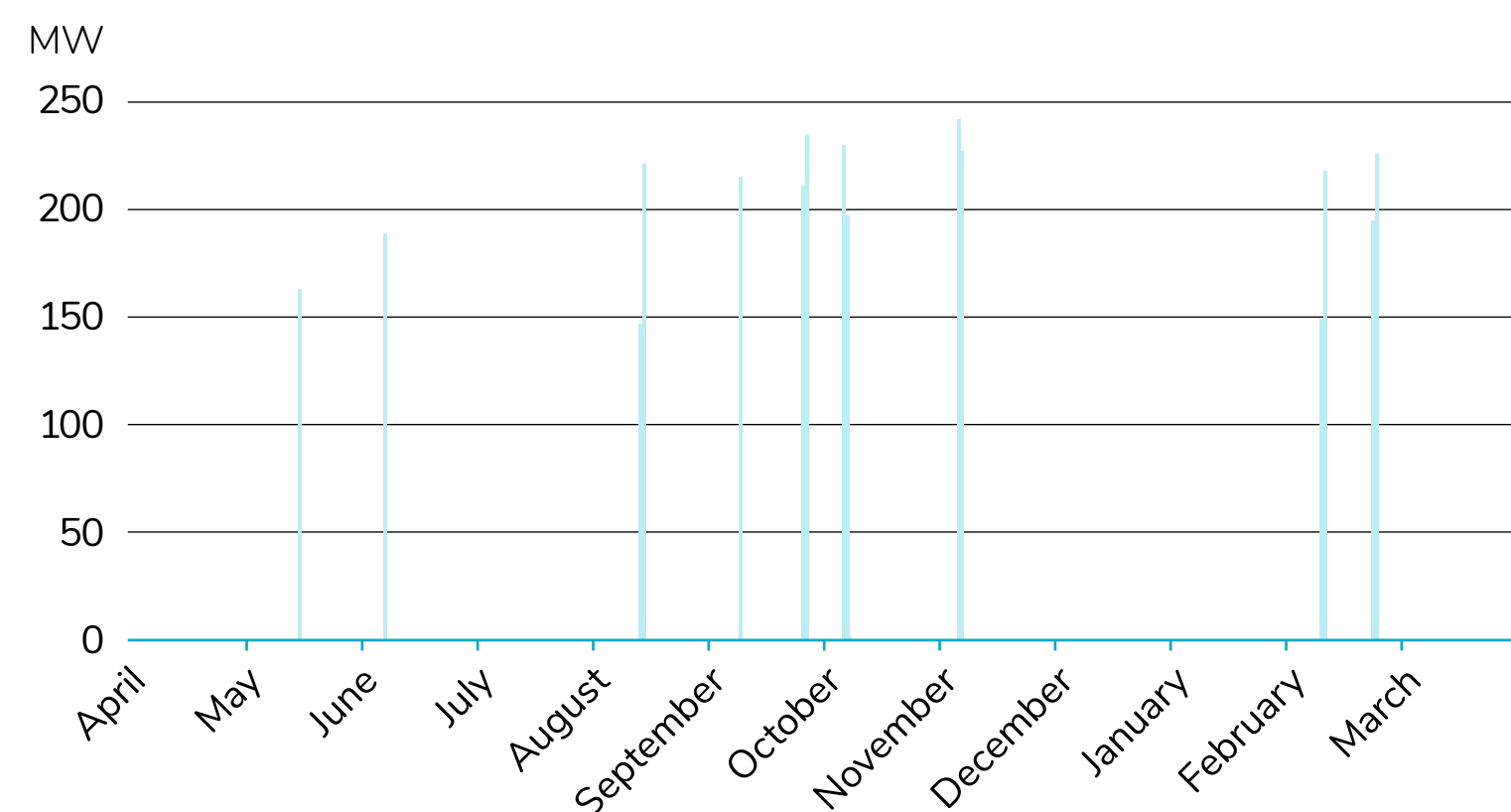
Meri-Pori

TVO has a 45 percent holding in the Meri-Pori coal-fired power plant owned and operated by Fortum Power and Heat Oy. Fortum received TVO's share of Meri-Pori's power capacity at the beginning of 2019, and TVO will renounce its share of Meri-Pori's capacity in the beginning of July 2020.

The amount of electricity produced by TVO's share at the Meri-Pori coal-fired power plant in January 1–March 31, 2020 was 18.9 (130.7) GWh requiring 6.8 (47.4) thousand tons of coal and 16.7 (108.1) thousand tons of carbon dioxide emission rights.

TVO's share of Meri-Pori's production

Average electrical power
April 1, 2019–March 31, 2020



Acquisitions of Tangible and Intangible Assets and Shares

Investments during the period under review were EUR 14.2 (65.8) million. Investments of the parent company were EUR 12.2 (63.2) million, of which EUR 5.2 (52.2) million were allocated to the OL3 project. During the period under review the penalty payment stipulated by the comprehensive settlement agreement has been taken into account in the OL3 project investment.

During the period under review, emission rights were acquired worth EUR 0.3 (2.4) million. The Company's need for carbon dioxide emission rights for the period under review is covered by the emission rights acquired.

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 excess costs and project delays, and stating 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 addition, Wärtsilä announced that internal clearance on the costs to be demanded from TVO is still ongoing. At the end of the review period, the situation has remained unchanged.

Personnel

The total number of personnel in the Group at the end of the period under review was 966 (December 31, 2019: 942, March 31, 2019: 900). The number of permanent employees in the Group at the end of the period under review was 940 (December 31, 2019: 923, March 31, 2019: 877).

Shareholders' Unanimous Decisions to the Annual General Meeting

Due to the coronavirus epidemic, Teollisuuden Voima Oyj's Annual General Meeting in spring 2020 was not held physically. Shareholders decided unanimously on the matters belonging to the Annual General Meeting on 25 March 2020 according to the special provision in the Limited Liability Companies Act. The shareholders confirmed the consolidated income statement and balance sheet, discharged the Board members and the President and CEO from liability, and elected Board members for the next term.

PricewaterhouseCoopers Oy, Authorised Public Accountants, was elected as the Company's auditing firm. The principal responsible auditor changed from Jouko Malinen, Authorised Public Accountant, to Niina Vilske, Authorised Public Accountant.

Juha-Pekka Weckström was elected as a new Board member to replace Pekka Manninen. The other Board members were re-elected. In its organisation meeting, the Board of Directors elected Tiina Tuomela as the Chair of the Board and Ilkka Tykkyläinen as the Vice-Chair. The Board of Directors also elected chairs for 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 2019 Report of the Board of Directors.

During the review period, the coronavirus epidemic which has become a pandemic (COVID-19), has introduced divergent procedures at Olkiluoto. The TVO Group operates responsibly and proactively in all situations therefore undertaking extensive measures to curb the transmission of coronavirus infections. 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. The rapidly spreading coronavirus pandemic may cause divergent arrangements in the Group's operations throughout the rest of the year.

The TVO Group has a pandemic contingency plan describing the phased-in operating measures needed to prevent the spread of the pandemic. With these actions, the aim is to minimise the business impacts of the pandemic risk.

Assessment of Year-End Developments

In the current financial year, despite the effects of the coronavirus 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. Realization of the OL3 EPR nuclear power plant project and preparing the plant unit for production will be continued. Commissioning tests and maintenance work are needed before fuel loading. For the loading of nuclear fuel, TVO still needs a separate permission from STUK. TVO will continue to support the Supplier to complete the project.

The Meri-Pori coal-fired power plant's capacity is used according to Fortum's operation plan.

Posiva continues the implementation of the final disposal plant project. The excavation work is progressing in the first central tunnels, the construction work of the encapsulation plant is progressing to ground level, procurement is focusing on safety-classified systems and criteria are being specified for Posiva's preparedness to submit an operating licence application at the end of 2021.

The rapidly spreading coronavirus pandemic causes uncertainty towards the end of the year. It causes divergent arrangements in the Group's operations throughout the rest of the year. Changes will have to be made to the practical implementation of the annual outage and implementation of regulatory inspections and projects. In addition, efforts are made to ensure the operation of subcontracting chains and to minimize the possible effects of the coronavirus on the Group.

The coronavirus pandemic has had a significant effect on the financial markets and increased volatility. TVO has a substantial liquidity buffer. Consequently, even the strong volatility caused by the the coronavirus pandemic on the markets is not expected to affect TVO's financing standing or the figures reported in the short term.

Events after the Period under Review

TVO has on 8 April 2020 submitted an permission application to the Finnish Radiation and Nuclear Safety Authority (STUK) for nuclear fuel loading of the Olkiluoto 3 EPR nuclear power plant unit. TVO estimates that it will take a few months to obtain the permit. When the results of the remaining commissioning tests have been analyzed and the competencies have been ascertained, and construction inspections have been approved as well as the results of the other remaining work submitted, the Authority can give permission to nuclear fuel loading.

Works at Olkiluoto 3 site have not completely proceeded as planned. There has been a significant amount of measures taken to prevent the spreading of the coronavirus epidemic (COVID-19) in order to minimize the effects of pandemic risk to the project. The coronavirus pandemic may have significantly added uncertainty to the progress of the project. According to the information given to TVO by the supplier, the fuel will not be loaded into the reactor as planned in June 2020, and it is possible that the regular electricity production will be delayed respectively. Areva-Siemens Consortium will update the schedule for OL3 EPR unit as soon as spreading and effects of the coronavirus pandemic are known. Areva is currently working on a plan, with support of all parties, to secure funding until the end of the project.

According to the schedule provided by the Plant Supplier Areva-Siemens Consortium in December 2019, the nuclear fuel loading was to take place in June 2020, electricity production would have started in November 2020 and regular electricity production in March 2021.

TVO has extended the maturities of EUR 400 million bilateral loans in total approximately by one year to 2023.

Due to Covid-19 related delay in OL3 fuel loading Standard & Poor's (S&P) has 15 April 2020 downgraded TVO's long term credit rating from BB+ to BB; outlook negative.

April 20, 2020

Teollisuuden Voima Oyj
Board of Directors

Key Figures of TVO Group

TVO Group (IFRS) (M€)	Q1 2020	Q1 2019	Q1-Q4 2019
Turnover	73	87	254
Profit/loss for the period	6	2	87
Investments ¹⁾	14	66	369
Equity	1,820	1,743	1,819
Subordinated shareholder loans (hybrid equity) (included in the former) ³⁾	679	679	679
Non-current and current interest-bearing liabilities (excluding loan from VYR) ²⁾	4,316	4,132	4,370
Loan from VYR ²⁾	716	591	591
Provision related to nuclear waste management	1,038	957	1,041
Balance sheet total	7,998	7,542	7,942
Equity ratio % ⁴⁾	29.2	29.1	28.8
Average number of personnel	957	902	943

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 2020	Q1 2019	Q1-Q4 2019
Turnover	72	87	251
Profit/loss before appropriations	7	2	5
Fuel costs	16	19	65
Nuclear waste management costs	7	20	-5
Capital expenditure (depreciation and financial income and expenses)	10	10	39
Investments ¹⁾	12	63	278
Equity	857	857	857
Appropriations	200	189	193
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) ²⁾	4,225	4,052	4,282
Loans from equity holders of the company ³⁾	679	679	679
Loan from VYR ²⁾	716	591	591
Balance sheet total	6,785	6,488	6,724
Equity ratio % ⁴⁾	28.6	29.3	28.2
Average number of personnel	956	901	942

Electricity delivered to equity holders of the company (GWh)

	Q1 2020	Q1 2019	Q1-Q4 2019
Nuclear power	3,850	3,838	14,729
Coal-fired power	19	131	182
Total	3,869	3,969	14,911

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

Consolidated financial statement in brief and notes

Consolidated income statement

EUR 1,000	Q1 2020	Q1 2019	Q1-Q4 2019
Turnover	72,945	87,096	254,208
Work performed for own purposes	5,384	5,033	18,596
Other income	3,217	3,065	12,796
Materials and services	-17,826	-34,345	-81,966
Personnel expenses	-16,566	-15,594	-67,787
Depreciation and impairment charges	-11,248	-10,418	-45,488
Other expenses	-22,074	-22,247	-92,798
Operating profit/loss	13,832	12,590	-2,439
Finance income	2,898	2,958	11,550
Finance expenses	-11,124	-13,785	76,700
Total finance income and expenses	-8,226	-10,827	88,250
Share of the profit/loss of joint ventures	78	264	1,385
Profit/loss before income tax	5,684	2,027	87,196
Profit/loss for the period	5,684	2,027	87,196
Profit/loss for the period attributable to:			
Equity holders of the company	5,684	2,027	87,196

Consolidated statement of comprehensive income

EUR 1,000	Q1 2020	Q1 2019	Q1-Q4 2019
Profit/loss for the period	5,684	2,027	87,196
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges	-3,680	-3,000	-8,028
Total other comprehensive profit/loss items for the period	-3,680	-3,000	-8,028
Total comprehensive profit/loss for the period	2,004	-973	79,168
Total comprehensive profit/loss for the period attributable to:			
Equity holders of the company	2,004	-973	79,168

Consolidated statement of financial position

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Assets			
Non-current assets			
Property, plant and equipment	5,664,992	5,407,982	5,663,306
Intangible assets	5,896	11,278	5,961
Loans and other receivables	779,373	594,494	596,417
Investments in joint ventures	7,452	6,253	7,374
Investments in shares	1,934	1,934	1,934
Derivative financial instruments	24,890	36,329	29,254
Share in the Finnish State Nuclear Waste Management Fund	1,038,026	956,584	1,040,826
Total non-current assets	7,522,563	7,014,854	7,345,072
Current assets			
Inventories	286,266	268,316	269,856
Trade and other receivables	24,996	145,131	73,262
Derivative financial instruments	17,377	5,274	15,859
Cash and cash equivalents	146,664	108,487	237,832
Total current assets	475,303	527,208	596,809
Total assets	7,997,866	7,542,062	7,941,881
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	3	3	3
Fair value and other reserves	-9,058	-350	-5,378
Subordinated shareholder loans (hybrid equity)	679,300	679,300	679,300
Retained earnings	307,316	221,316	302,724
Total equity	1,820,309	1,743,017	1,819,397

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	1,038,026	956,584	1,040,826
Loan from the Finnish State Nuclear Waste Management Fund	716,447	591,441	591,441
Bonds	2,688,081	2,517,100	2,858,937
Other financial liabilities	1,019,899	1,071,589	1,040,301
Derivative financial instruments	50,501	30,028	29,820
Total non-current liabilities	5,512,954	5,166,742	5,561,325
Current liabilities			
Current financial liabilities	545,027	503,481	422,769
Derivative financial instruments	12,245	10,211	18,365
Advance payments received	17,790	20,507	17,788
Trade payables	18,372	11,476	6,655
Other current liabilities	71,169	86,628	95,582
Total current liabilities	664,603	632,303	561,159
Total liabilities	6,177,557	5,799,045	6,122,484
Total equity and liabilities	7,997,866	7,542,062	7,941,881

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 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 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 2019	600,365	242,383	3	2,650	679,300	220,556	1,745,257	1,745,257
Profit/loss for the period	0	0	0	0	0	2,027	2,027	2,027
Other comprehensive items:								
Cash flow hedges	0	0	0	-3,000	0	0	-3,000	-3,000
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-1,267	-1,267	-1,267
Equity 31 Mar 2019	600,365	242,383	3	-350	679,300	221,316	1,743,017	1,743,017

Consolidated statement of cash flows

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Operating activities			
Profit/loss for the period	5,684	2,027	87,196
Adjustments:			
Finance income and expenses	8,226	10,827	-88,250
Depreciation and impairment charges	11,248	10,418	45,488
Share of the profit/loss of joint ventures	-78	-264	-1,385
Other non-cash flow income and expenses	-8,527	-11,218	1,488
Sales profit/loss of property, plant and equipment and shares	-51	0	-16
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	46,030	1,467	76,952
Increase (-) or decrease (+) in inventories	-16,376	-7,637	-8,985
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	5,164	-12,522	-25,404
Interest paid and other finance expenses	-953	-978	-3,437
Interest received	3,149	3,444	3,497
Cash flow from operating activities	53,516	-4,436	87,144
Investing activities			
Acquisition of property, plant and equipment	-81,858	-88,449	-395,144
OL3 EPR project compensation	0	0	122,000
Proceeds from sale of property, plant and equipment	127	0	23
Acquisition of intangible assets	-31	-48	-97
Loan receivables granted	-125,005	-9,205	-9,098
Repayments of loans granted	0	84,006	84,006
Cash flow from investing activities	-206,767	-13,696	-198,310

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Financing activities			
Withdrawals of long-term loans	125,005	100,000	943,192
Repayment of long-term loans	-70,945	-369,191	-817,151
Principal elements of lease payments	-950	0	-2,049
Interest paid of subordinated shareholder loans (hybrid equity)	-589	-737	-5,170
Increase (-) or decrease (+) in interest-bearing receivables	-3,950	0	-2,030
Increase (+) or decrease (-) in current financial liabilities	13,512	175,381	11,039
Cash flow from financing activities	62,083	-94,547	127,831
Change in cash and cash equivalents	-91,168	-112,679	16,665
Cash and cash equivalents at the beginning of period	237,832	221,166	221,166
Cash and cash equivalents at the end of period	146,664	108,487	237,832

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 31 December 2019. Additionally the changes according to the revised IAS/IFRS standards have been adopted. During the period under review the coronavirus epidemic which has become a pandemic (COVID-19) has not affected 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 31 December 2019.

Comparability of the income statement

The total cost estimate based on a new nuclear waste management technical plan and schedule updated in June 2019. The costs for spent fuel disposal are expensed during the operating time of the plant, based on fuel usage, and the impact of any changes to the plan and schedules will be recognized immediately in the income statement

based on fuel used by the end of each accounting period. Updated cost estimate increased in 2019 the provision related to the nuclear waste management and decreased the amount of materials and services and finance expenses. The overall effect on profit in 2019 was positive 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 was entered as an adjustment to materials and services. The positive profit impact of the updates and changes was mainly non-recurring. See note Assets and provisions related to nuclear waste management obligation.

Olkiluoto 3 EPR

TVO's management has estimated that TVO is entitled to receive the compensation of EUR 318 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 March 2021. During the period under review TVO has recognized receivables 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 two reportable segments; nuclear power and coal 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 is produced by TVO share at the Meri-Pori coal-fired power plant. Fortum will be entitled to use TVO's share of the Meri-Pori capacity as of the beginning of 2019, and TVO will relinquish its share in Meri-Pori in full in the beginning of 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 2020	Q1 2019	Q1-Q4 2019
Nuclear power	71,188	79,340	238,197
Coal-fired power	1,757	7,756	16,011
Total	72,945	87,096	254,208

Profit/loss for the period by segments

EUR 1,000	Q1 2020	Q1 2019	Q1-Q4 2019
Nuclear power	6,881	1,898	5,278
Coal-fired power	0	0	0
Profit/loss before appropriations (FAS)	6,881	1,898	5,278
The impact of the nuclear waste management obligation	-1,582	-587	79,258
The impact of financial instruments	135	290	647
Other IFRS adjustments	172	162	628
Share of the profit/loss of joint ventures	78	264	1,385
Total (IFRS)	5,684	2,027	87,196

Assets by segments

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Nuclear power	6,779,923	6,475,311	6,711,401
Coal-fired power	4,875	12,984	12,505
Total (FAS)	6,784,798	6,488,295	6,723,906
The impact of the nuclear waste management obligation	1,169,851	1,010,146	1,174,234
The impact of financial instruments	13,288	9,049	12,904
The impact of finance leases	51,440	53,171	51,440
Other IFRS adjustments	-27,952	-23,841	-26,966
Share of the profit/loss of joint ventures	6,441	5,242	6,363
Total (IFRS)	7,997,866	7,542,062	7,941,881

Changes in property, plant and equipment

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Opening net book amount	5,663,306	5,353,922	5,353,922
Increase	14,154	65,733	364,212
Decrease	-1,317	-1,358	-53,768
Depreciation and impairment charges	-11,151	-10,315	-45,094
Accumulated depreciation from deduction	0	0	44,034
Closing net book amount	5,664,992	5,407,982	5,663,306

Changes in intangible assets

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Opening net book amount	5,961	11,333	11,333
Increase	32	48	5,239
Decrease	0	0	-10,216
Depreciation and impairment charges	-97	-103	-395
Closing net book amount	5,896	11,278	5,961

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 2019.

The ongoing coronavirus pandemic has severe impacts on the global financial markets and has increased market volatility substantially. TVO has significant liquidity buffers in the form of various credit facilities and cash, and therefore the current circumstances are not estimated to have material impact on TVO's financial position and reporting in the short term.

Derivative financial instruments

Nominal values of the derivative financial instruments

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
Interest rate swaps	1,815,126	1,996,071	1,996,071
Forward foreign exchange contracts and swaps ¹⁾	89,467	113,700	109,217
Cross-currency swaps	518,701	554,720	589,613
Total	2,423,294	2,664,491	2,694,902

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⁾	31 Mar 2020			31 Mar 2019			31 Dec 2019		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
EUR 1,000									
Interest rate swaps									
Cash flow hedges	461	-25,716	-25,255		-14,262	-14,262		-20,598	-20,598
Fair value hedges	12,305		12,305	14,812		14,812	12,322		12,322
Non-hedges		-6,099	-6,099		-5,427	-5,427		-5,825	-5,825
Forward foreign exchange contracts and swaps									
Cash flow hedges	15,821	-81	15,741	13,821	-131	13,690	15,050	-240	14,810
Non-hedges	1,228	-13	1,215	939	-86	853	2,657	-149	2,508
Cross-currency swaps									
Non-hedges	12,451	-30,838	-18,386	12,032	-20,335	-8,303	15,084	-21,373	-6,289
Total	42,267	-62,747	-20,479	41,603	-40,239	1,364	45,113	-48,185	-3,073

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

TVO Group debt structure by maturity

31 Mar 2020

EUR 1,000	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029-	Total
Loans from financial institutes	44,413	149,498	519,699	150,608	26,104	26,104	26,104	26,104	11,818	0	980,452
Public bonds	61,009	153,781	250,561	500,000	644,900	500,000	650,000	75,000		88,000	2,923,251
Loans from other sources	79,114		56,117								135,231
Lease liabilities	1,064	1,960	1,936	1,937	1,784	43,545					52,226
Commercial papers	185,967										185,967
Total	371,567	305,239	828,313	652,545	672,787	569,649	676,104	101,104	11,818	88,000	4,277,126

TVO Group credit commitment by maturity

31 Mar 2020

EUR 1,000	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029-	Total
Syndicated revolving credit facility			300,000	1,000,000							1,300,000
Bilateral revolving credit facility											
Bilateral bank loan	100,000										100,000
Total	100,000		300,000	1,000,000							1,400,000

Both syndicated and bilateral facilities are undrawn.

The average interest rate on loans and derivatives on 31 March 2020 was 1.61% (31 Dec 2019: 1.63%).

On 31 March 2020, the Group had undrawn credit facilities amounting to EUR 1,400 million (2019: EUR 1,300 million). In addition, the Group had subordinated shareholder loan (hybrid equity) commitments totaling EUR 250 million (2019: EUR 250 million) and cash and cash equivalents amounting to EUR 147 million (2019: EUR 238 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 2020		
	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments, no hedge accounting		13,680	
Derivative financial instruments designated as cash flow hedges		16,282	
Derivative financial instruments designated as fair value hedges		12,305	
Fund units			
Investments in other shares ¹⁾			1,934
Total		42,267	1,934
Financial liabilities at fair value			
Derivative financial instruments, no hedge accounting		36,950	
Derivative financial instruments designated as cash flow hedges		25,797	
Derivative financial instruments designated as fair value hedges			
Total		62,747	

¹⁾ On 31 March 2020, TVO has unquoted shares worth EUR 1,934 (2019:1,934) 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 2019		
	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments, no hedge accounting		17,741	
Derivative financial instruments designated as cash flow hedges		15,050	
Derivative financial instruments designated as fair value hedges		12,322	
Fund units			
Investments in other shares ¹⁾			1,934
Total		45,113	1,934
Financial liabilities at fair value			
Derivative financial instruments, no hedge accounting		27,348	
Derivative financial instruments designated as cash flow hedges		20,838	
Derivative financial instruments designated as fair value hedges			
Total		48,185	

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 2020		
	Financial liabilities measured at amortized cost	Book Value	Fair value
Non-current liabilities			
Other financial liabilities ¹⁾	3,707,980	3,707,980	3,739,110

Book values of financial assets and liabilities by categories

EUR 1,000	31 Dec 2019		
	Financial liabilities measured at amortized cost	Book Value	Fair value
Non-current liabilities			
Other financial liabilities ¹⁾	3,899,238	3,899,238	4,046,541

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 2020	31 Mar 2019	31 Dec 2019
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	1,038,026	956,584	1,040,826
Provision related to nuclear waste management (non-current liabilities)	1,038,026	956,584	1,040,826

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 2020	31 Mar 2019	31 Dec 2019
Liability for nuclear waste management according to the Nuclear Energy Act	1,471,400	1,505,800	1,471,400
Funding target obligation	1,471,400	1,505,800	1,471,400
TVO's share in the Finnish State Nuclear Waste Management Fund	1,471,400	1,505,800	1,513,500
Difference between the liability and TVO's share of the fund	0	0	-42,100

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.

The total cost estimate based on a new nuclear waste management technical plan and schedule updated in June 2019. The costs for spent fuel disposal are expensed during the operating time of the plant, based on fuel usage, and the impact of any changes to the plan and schedules will be recognized immediately in the income statement based on fuel used by the end of each accounting period. The overall effect on profit for the period in 2019 was positive 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.

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 2019 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 2020 from the Nuclear Waste Management Fund to TVO in respect of 2019 according to the rules of the Fund. Assets from the Nuclear Waste Management Fund is estimated to refund to TVO also in respect of 2020.

TVO's share in the Finnish State Nuclear Waste Management Fund on March 31, 2020 is EUR 1,471.4 million. The carrying amount in the balance sheet is EUR 1,038.0 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 2020	31 Mar 2019	31 Dec 2019
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	716,447	591,441	591,441
Guarantees given by shareholders related to the nuclear waste management obligation	77,980	135,970	77,980

Investment commitments

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

EUR 1,000	31 Mar 2020	31 Mar 2019	31 Dec 2019
OL1 and OL2	78,700	72,100	80,600
OL3	443,000	362,700	411,800
Total	521,700	434,800	492,400

Pending Court Cases and Disputes

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