

INTERIM REPORT JANUARY-JUNE

2020

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Teollisuuden Voima Oyj's Interim Report January 1–June 30, 2020

DURING the first half of 2020, Teollisuuden Voima's (TVO) electricity generation at Olkiluoto 1 and Olkiluoto 2 plant units continued safely and reliably.

The annual outages at the Olkiluoto NPP were carried out with special arrangements in place in order to prevent coronavirus infections on the power plant site. The maintenance outage implemented at the OL1 plant unit was adjusted in scope and duration from the original plan due to the exceptional circumstances. OL2 plant unit underwent a refuelling outage.

TVO has received interim information of the rebaseline schedule for the commissioning of the Olkiluoto 3 EPR plant unit (OL3 EPR) from the plant supplier Areva–Siemens Consortium. The schedule work is estimated to be completed in August 2020. The installation of the electrical systems, the instrumentation and control system (I&C), and the mechanical systems are continued at the Olkiluoto 3 site as the plant unit is prepared for the loading of nuclear fuel.

The construction works of Posiva's encapsulation plant and final disposal facility proceeded as planned.

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

Operating Environment

The sustainable investment package has entered a new phase where the EU Commission has a formal mandate to adopt delegated legislation. Due to cross-DG disagreement and delays within the Commission, the assessment of the nuclear sector's taxonomy eligibility will be postponed to 2021.

The Commission has proposed a major recovery plan. In this plan, the Commission proposes the creation of a next generation EU recovery fund. This would allow the Commission to borrow EUR 750 billion from the financial markets to help the EU recover from the COVID-19 pandemic. In order to receive funding, the Commission requires the member states to take into account the national energy and climate plans (NECPs) in their recovery packages.

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 used 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–June 30, 2020 was EUR 145.0 (January 1–June 30, 2019: EUR 124.6) million. Higher fixed fee invoiced from shareholders during the period under review was mainly due to the Nuclear Waste Management fee (see Nuclear Waste Management).

The amount of electricity delivered to shareholders was 7,082.2 (7,035.1) GWh. The higher delivery volume of Olkiluoto plant units was due to shorter outages compared to the previous year. Meri-Pori power plant's electricity delivered was lower than in the previous year.

The consolidated profit/loss was EUR 6.8 (27.6) million. Updates to the cost estimate for the new nuclear waste management technical plan and schedule and changes of the provision regarding nuclear waste management obligation affected the profit/loss and turnover for the previous year's review period.

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, totaled EUR 4,974.9 (December 31, 2019: 4,961.6) million, of which EUR 679.3 (679.3) million were subordinated shareholder loans. TVO raised a total of EUR 100.0 (EUR 100.0) million in non-current liabilities and repaid non-current liabilities in the amount of EUR 147.2 (293.5) million.

The company has EUR 1,300 million syndicated revolving credit facility in total which consists of two tranches. EUR 1,000 million matures in 2023 and EUR 300 million matures in 2022. TVO has made a new 3-year bilateral bank loan of EUR 100 million in 2020. In addition, TVO has agreed to extend bilateral loans totaling EUR 500 million by approximately one year until 2023.

The OL3 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 June 30, 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 March 31, 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.

Due to coronavirus pandemic related delay in OL3 EPR fuel loading Standard & Poor's (S&P) downgraded on April 15, 2020 TVO's long term credit rating from BB+ to BB; outlook negative.

Fitch Ratings (Fitch) confirmed on April 20, 2020 Teollisuuden Voima Oyj's long term credit rating at its current level BBB- and changed the Outlook from Stable to Negative. According to Fitch the negative outlook reflected the latest announced delay of OL3 EPR fuel loading, uncertainty caused by the coronavirus pandemic and the current weak power price environment.

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 7,013 (6,910) GWh. The total load factor was 90.4 (89.6) %.

The plant units operated safely and reliably during the period under review. OL1's net production was 3,404 (3,615) GWh and the load factor 87.7 (93.7)%. OL2's net production was 3,609 (3,295) GWh and the load factor 93.1 (85.4)%.

Annual Outages

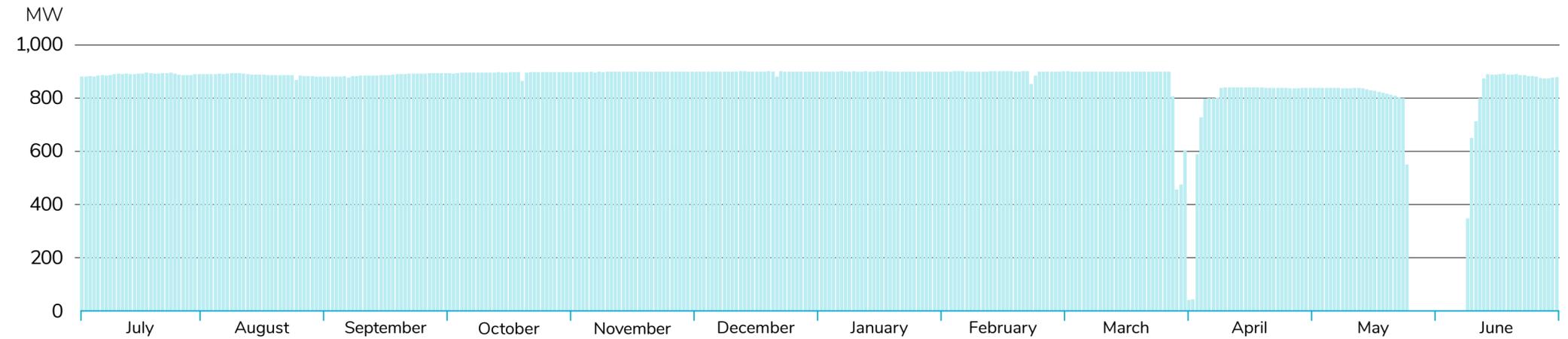
The refueling and maintenance outages carried out at the plant units on alternating years are designed to ensure that a good level of operability and production is maintained at the Olkiluoto nuclear power plant at all times.

The annual outages 2020 at the Olkiluoto NPP were carried out with special arrangements in place in order to prevent coronavirus infections on the power plant site. The maintenance outage implemented at the OL1 was adjusted in scope and duration from the original plan due to the exceptional circumstances. Extensive modernizations without safety or usability significance were transferred to be completed in coming outages. The duration of the outage at OL1 was circa 14 days and the plant was connected back to the national grid on June 8, 2020. The outage at OL2 was a 11 days fuel exchange outage ending on May 21, 2020.

In addition to fuel exchange the most significant works were the modernization of the bushing modules of the containment,

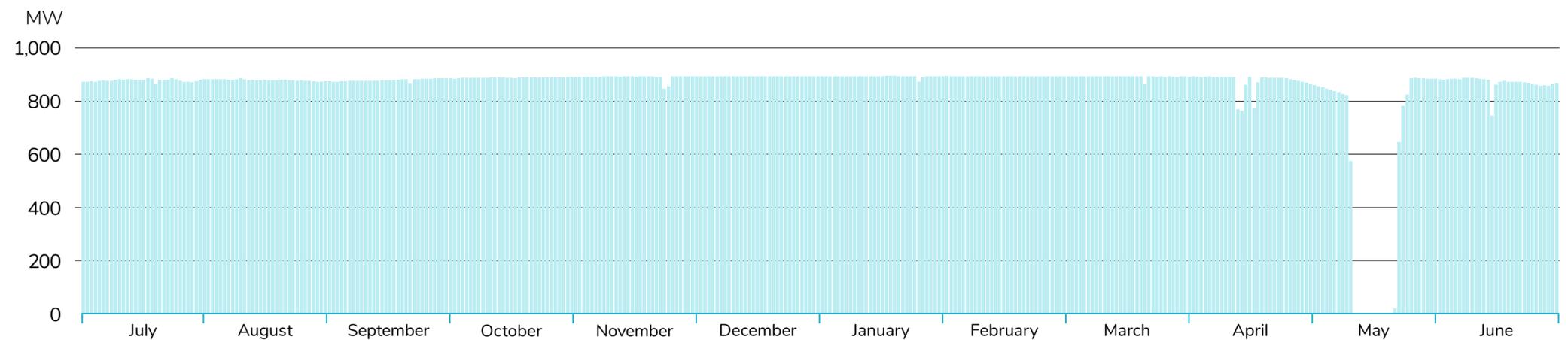
Olkiluoto 1

Average electrical power
July 1, 2019–June 30, 2020



Olkiluoto 2

Average electrical power
July 1, 2019–June 30, 2020



modernization of the valve actuator in cooling system of shut down reactor as well as changing of two valves, the connection of recirculation line to one subsystem in auxiliary feed water systems as well as repair works, preventive maintenance, inspections and testing.

In order to ensure that the annual outages could be organised in a safe manner in the exceptional circumstances, TVO cooperated extensively with various authorities, such as the Satakunta Hospital District and infection units of the neighbouring municipalities and cities. The general guidelines of the Finnish Government as well as the recommendations of the Finnish Institute for Health and Welfare (THL) were observed in all activities. A large number of special arrangements and measures were put in place to prevent the spreading of Covid-19 infections in Olkiluoto in order to safeguard the health and safety of the persons involved in the annual outages. The protective measures taken were successful, and no infections occurred during the annual outages. An annual outage coronavirus group was set up for planning and safe implementation of the annual outages; the group met daily during the outages to assess compliance with the measures.

No accidents at work resulting in absence occurred during the annual outages.

This year the outages employed at OL1 688 and at OL2 568 subcontractors.

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 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 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 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 the plant supplier. The compensation decreases the historical costs of property, plant and equipment in the balance sheet.

In March 2019, the Government issued an operating licence for the plant unit. TVO submitted on 8 April, 2020 an permission application to the Finnish Radiation and Nuclear Safety Authority (STUK) for nuclear fuel loading of the OL3 EPR nuclear power plant unit.

TVO issued on 2 July, 2020 a stock exchange release stating that TVO has received interim information of the rebaseline schedule for the commissioning of the OL3 EPR plant unit from the plant supplier Areva–Siemens Consortium. The schedule work is estimated to be completed in August 2020. The new management of Areva, the plant supplier party, is preparing a financial solution to complete the project according to an upcoming schedule. TVO is also negotiating with the plant supplier Areva–Siemens consortium on the terms of completing the OL3 project.

The work at Olkiluoto 3 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. At the power plant unit OL3 EPR some unfinished technical issues are still waiting to be solved before loading of fuel. In the mechanical pilot valves of the pressurizer safety relief valves cracks were observed and investigations for this is going on. In addition the faulted components in the emergency diesel generators and the vibrations in the connecting line of one of the steam generators are under work. 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.

Significant arrangements have been made at the OL3 site preventing the coronavirus infections. Despite of coronavirus restrictions, work has been able to continue under special arrangements.

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 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 39.7 (34.4) million and the amount consumed to EUR 29.0 (28.1) million.

The nuclear fuel and uranium stock carrying value on June 30, 2020 was EUR 272.6 (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 statement show a provision related to nuclear waste management liability of EUR 1,039.4 (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 accordingly with the Finnish Nuclear Energy Act. In November 2019, MEAE set TVO's liability for nuclear waste management at EUR 1,471.4 (1,505.8) million to the end of 2019 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).

Cost estimate of Nuclear Waste Management for Financial Provisions ie. the Nuclear Waste Management Scheme was submitted to Ministry of Economic Affairs and Employment of Finland in the end of June 2020. The updated costs are based on the waste management plan for 2019–2021 submitted to the Ministry of Employment and the Economy in June 2019. The waste management plan includes an estimate of the costs of nuclear waste management for financial provision.

The waste management fee collected from those liable for nuclear waste management is based on the nuclear waste management plan to be updated every three years, costs updated during the intermediate years and return of the Nuclear Waste Management Fund.

Work on at Posiva's encapsulation plant site and final disposal facility at ONKALO has progressed despite of extensive measures to prevent the spread of COVID-19 infections. The excavation and method test plans for the co-operation test testing final disposal have been submitted to STUK.

Coal Power

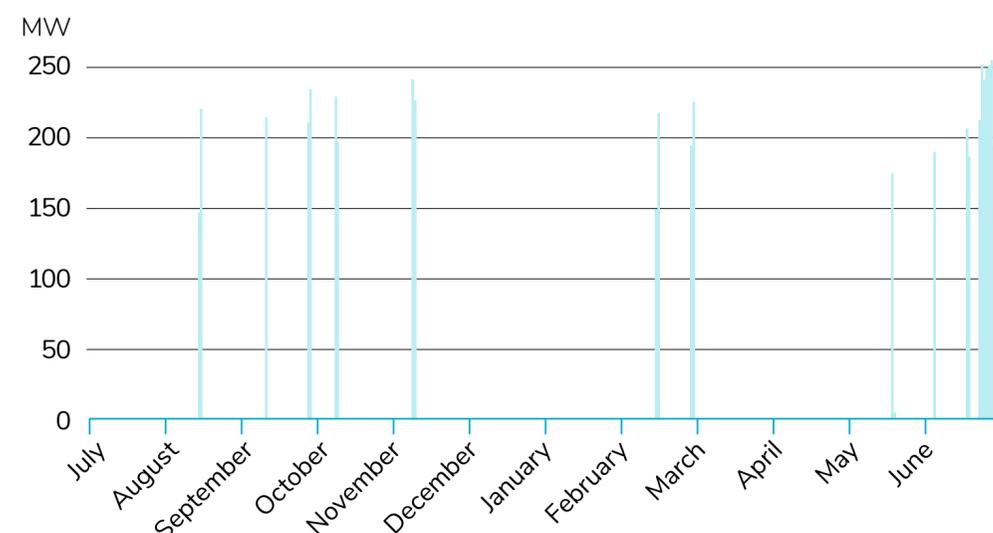
Meri-Pori

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 in the beginning of 2019 and TVO renounced 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 on January 1–June 30, 2020 was 82.4 (139.2) GWh requiring 30.7 (58.1) thousand tons of coal and 72.6 (114.2) thousand tons of carbon dioxide emission rights.

TVO's share of Meri-Pori's production

Average electrical power
July 1, 2019–June 30, 2020



Acquisitions of Tangible and Intangible Assets and Shares

Investments during the period under review were EUR 34.1 (177.7) million. Investments of the parent company were EUR 26.7 (128.9) million, of which EUR 4.2 (103.9) million were allocated to the OL3 project. During the period under review, the OL3 project's investment has taken into account the additional compensation in accordance with the overall settlement agreement.

Carbon dioxide emission rights have been relinquished to the Energy Authority worth EUR 3.7 (10.2) million. During the review period, purchases of carbon dioxide emission rights amounted to EUR 1.7 (4.1) million. The Company's need for carbon dioxide emission rights for the period under review are covered by acquired emission rights.

Pending Court Cases and Disputes

TVO and Wärtsilä Finland Oy (Wärtsilä) signed an agreement on delivery of Emergency Diesel Generators and their auxiliary systems to Olkiluoto nuclear power plant (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 are 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 that will 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 1,042 (December 31, 2019: 942, June 30, 2019: 994). The number of permanent employees in the Group at the end of the period under review was 951 (December 31, 2019: 923, June 30, 2019: 881).

Shareholders' Unanimous Decisions to the Annual General Meeting

Due to the coronavirus pandemic, 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.

The project schedule update of OL3 EPR plant unit is still in progress. TVO has received interim information of the rebaseline schedule for the commissioning of the OL3 EPR plant unit from the plant supplier Areva-Siemens Consortium. The schedule work is estimated to be completed in August 2020. At the same time, TVO has updated Nordpool with an additional two-month delay, which will be updated after the completion of the schedule work. The new management of Areva, the plant supplier party, is preparing a financial solution to complete the project according to an upcoming schedule. TVO is also negotiating with the plant supplier Areva-Siemens consortium on the terms of completing the OL3 project.

The coronavirus pandemic has introduced divergent procedures at Olkiluoto. The TVO Group has operated responsibly and proactively in all situations therefore undertaking extensive measures to prevent 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 changes of coronavirus pandemic global situation and in the neighbouring area of Olkiluoto may cause divergent arrangements in the Group's operations also throughout the rest of the year.

The TVO Group has a pandemic contingency plan in place that outlines step-by-step operating measures needed to prevent the spread of a pandemic. The pandemic preparedness plan has progressed to the stage, with the gradual easing of set corona preventing measures. The gradual mitigation is based on the fact that the Finnish national, Satakunta or Olkiluoto situation does not deteriorate. With these actions, the aim is to minimise the business impacts of the pandemic risk as proactively as possible.

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 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. TVO is negotiating with the plant supplier Areva-Siemens consortium on the terms of completing the OL3 project, and the OL3 project schedule work of plant supplier will be completed in August 2020.

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

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 gave up its share in Meri-Pori power plant in its entirety from the beginning of July 2020. At the same time, it was decided to cancel the series C shares.

TVO issued on 2 July, 2020 a stock exchange release on the continuation of the OL3 EPR's schedule work.

July 16, 2020

Teollisuuden Voima Oyj
Board of Directors

Key Figures of TVO Group

TVO Group (IFRS) (M€)	Q1-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Turnover	145	125	254
Profit/loss for the period	7	28	87
Investments ¹⁾	34	178	369
Equity	1,814	1,756	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⁾	4,392	4,202	4,370
Loan from VYR ²⁾	716	591	591
Provision related to nuclear waste management	1,039	989	1,041
Balance sheet total	8,069	7,654	7,942
Equity ratio % ⁴⁾	28.7	28.9	28.8
Average number of personnel	987	939	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-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Turnover	144	123	251
Profit/loss before appropriations	4	-16	5
Fuel costs	31	33	65
Nuclear waste management costs	15	0	-5
Capital expenditure (depreciation and financial income and expenses)	15	19	39
Investments ¹⁾	27	129	278
Equity	861	857	857
Appropriations	192	171	193
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) ²⁾	4,296	4,107	4,282
Loans from equity holders of the company ³⁾	679	679	679
Loan from VYR ²⁾	716	591	591
Balance sheet total	6,853	6,524	6,724
Equity ratio % ⁴⁾	28.2	28.8	28.2
Average number of personnel	986	938	942

Electricity delivered to equity holders of the company (GWh)

	Q1-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Nuclear power	7,000	6,896	14,729
Coal-fired power	82	139	182
Total	7,082	7,035	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-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Turnover	144,967	124,588	254,208
Work performed for own purposes	11,415	10,077	18,596
Other income	6,408	6,660	12,796
Materials and services	-35,096	10,455	-81,966
Personnel expenses	-38,028	-35,822	-67,787
Depreciation and impairment charges	-22,612	-21,605	-45,488
Other expenses	-50,568	-57,371	-92,798
Operating profit/loss	16,486	36,982	-2,439
Finance income	9,972	5,737	11,550
Finance expenses	-20,063	-15,686	76,700
Total finance income and expenses	-10,091	-9,949	88,250
Share of the profit/loss of joint ventures	362	553	1,385
Profit/loss before income tax	6,757	27,586	87,196
Profit/loss for the period	6,757	27,586	87,196
Profit/loss for the period attributable to:			
Equity holders of the company	6,757	27,586	87,196

Consolidated statement of comprehensive income

EUR 1,000	Q1-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Profit/loss for the period	6,757	27,586	87,196
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges	-9,983	-14,578	-8,028
Total other comprehensive profit/loss items for the period	-9,983	-14,578	-8,028
Total comprehensive profit/loss for the period	-3,226	13,008	79,168
Total comprehensive profit/loss for the period attributable to:			
Equity holders of the company	-3,226	13,008	79,168

Consolidated statement of financial position

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Assets			
Non-current assets			
Property, plant and equipment	5,670,087	5,506,059	5,663,306
Intangible assets	4,303	2,422	5,961
Loans and other receivables	833,373	594,495	596,417
Investments in joint ventures	7,736	6,542	7,374
Investments in shares	1,934	1,934	1,934
Derivative financial instruments	24,387	35,424	29,254
Share in the Finnish State Nuclear Waste Management Fund	1,039,378	989,255	1,040,826
Total non-current assets	7,581,198	7,136,131	7,345,072
Current assets			
Inventories	280,630	266,637	269,856
Trade and other receivables	33,259	119,685	73,262
Derivative financial instruments	15,353	5,040	15,859
Cash and cash equivalents	158,091	126,847	237,832
Total current assets	487,333	518,209	596,809
Total assets	8,068,531	7,654,340	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	-15,361	-11,928	-5,378
Subordinated shareholder loans (hybrid equity)	679,300	679,300	679,300
Retained earnings	307,212	245,573	302,724
Total equity	1,813,902	1,755,696	1,819,397

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	1,039,378	989,255	1,040,826
Loan from the Finnish State Nuclear Waste Management Fund	716,447	591,441	591,441
Bonds	2,705,208	2,464,010	2,858,937
Other financial liabilities	1,102,208	1,053,477	1,040,301
Derivative financial instruments	42,141	39,449	29,820
Total non-current liabilities	5,605,382	5,137,632	5,561,325
Current liabilities			
Current financial liabilities	541,507	623,667	422,769
Derivative financial instruments	786	21,025	18,365
Advance payments received	17,473	20,508	17,788
Trade payables	15,841	18,145	6,655
Other current liabilities	73,640	77,667	95,582
Total current liabilities	649,247	761,012	561,159
Total liabilities	6,254,629	5,898,644	6,122,484
Total equity and liabilities	8,068,531	7,654,340	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	6,757	6,757	6,757
Other comprehensive items:					0	0	0	0
Cash flow hedges	0	0	0	-9,983	0	0	-9,983	-9,983
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-2,269	-2,269	-2,269
Equity 30 Jun 2020	600,365	242,383	3	-15,361	679,300	307,212	1,813,902	1,813,902
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	27,586	27,586	27,586
Other comprehensive items:								
Cash flow hedges	0	0	0	-14,578	0	0	-14,578	-14,578
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	0	-2,569	-2,569	-2,569
Equity 30 Jun 2019	600,365	242,383	3	-11,928	679,300	245,573	1,755,696	1,755,696

Consolidated statement of cash flows

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Operating activities			
Profit/loss for the period	6,757	27,586	87,196
Adjustments:			
Finance income and expenses	10,091	9,949	-88,250
Depreciation and impairment charges	22,612	21,605	45,488
Share of the profit/loss of joint ventures	-362	-553	-1,385
Other non-cash flow income and expenses	-20,348	-54,618	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	38,677	27,664	76,952
Increase (-) or decrease (+) in inventories	-10,795	-5,958	-8,985
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	6,488	-11,709	-25,404
Interest paid and other finance expenses	-1,906	-1,881	-3,437
Dividends received	4,270	0	0
Interest received	3,153	3,455	3,497
Cash flow from operating activities	58,586	15,540	87,144
Investing activities			
Acquisition of property, plant and equipment	-144,048	-142,912	-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	-582	-68	-97
Loan receivables granted	-125,005	-9,205	-9,098
Repayments of loans granted	0	84,006	84,006
Cash flow from investing activities	-269,508	-68,179	-198,310

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Financing activities			
Withdrawals of long-term loans	300,005	100,000	943,192
Repayment of long-term loans	-147,161	-384,475	-817,151
Principal elements of lease payments	-1,020	0	-2,049
Interest paid of subordinated shareholder loans (hybrid equity)	-2,171	-2,548	-5,170
Increase (-) or decrease (+) in interest-bearing receivables	-3,950	0	-2,030
Increase (+) or decrease (-) in current financial liabilities	-14,522	245,343	11,039
Cash flow from financing activities	131,181	-41,680	127,831
Change in cash and cash equivalents	-79,741	-94,319	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	158,091	126,847	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. 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 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-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Nuclear power	139,154	113,162	238,197
Coal-fired power	5,813	11,426	16,011
Total	144,967	124,588	254,208

Profit/loss for the period by segments

EUR 1,000	Q1-Q2 2020	Q1-Q2 2019	Q1-Q4 2019
Nuclear power	3,691	-15,626	5,278
Coal-fired power	0	0	0
Profit/loss before appropriations (FAS)	3,691	-15,626	5,278
The impact of the nuclear waste management obligation	2,239	41,880	79,258
The impact of financial instruments	101	455	647
Other IFRS adjustments	364	324	628
Share of the profit/loss of joint ventures	362	553	1,385
Total (IFRS)	6,757	27,586	87,196

Assets by segments

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Nuclear power	6,845,782	6,520,803	6,711,401
Coal-fired power	7,069	3,309	12,505
Total (FAS)	6,852,851	6,524,112	6,723,906
The impact of the nuclear waste management obligation	1,175,025	1,085,284	1,174,234
The impact of financial instruments	12,510	12,137	12,904
The impact of finance leases	50,571	52,293	51,440
Other IFRS adjustments	-29,151	-25,017	-26,966
Share of the profit/loss of joint ventures	6,725	5,531	6,363
Total (IFRS)	8,068,531	7,654,340	7,941,881

Changes in property, plant and equipment

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Opening net book amount	5,663,306	5,353,922	5,353,922
Increase	31,834	176,196	364,212
Decrease	-2,640	-2,654	-53,768
Depreciation and impairment charges	-22,413	-21,405	-45,094
Accumulated depreciation from deduction	0	0	44,034
Closing net book amount	5,670,087	5,506,059	5,663,306

Changes in intangible assets

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
Opening net book amount	5,961	11,333	11,333
Increase	2,282	1,505	5,239
Decrease	-3,741	-10,216	-10,216
Depreciation and impairment charges	-199	-200	-395
Closing net book amount	4,303	2,422	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	30 Jun 2020	30 Jun 2019	31 Dec 2019
Interest rate swaps	1,874,117	2,196,071	1,996,071
Forward foreign exchange contracts and swaps ¹⁾	79,606	110,949	109,217
Cross-currency swaps	457,691	554,720	589,613
Total	2,411,414	2,861,741	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⁾	30 Jun 2020			30 Jun 2019			31 Dec 2019		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
EUR 1,000									
Interest rate swaps									
Cash flow hedges	16	-29,587	-29,571		-25,385	-25,385		-20,598	-20,598
Fair value hedges	12,159		12,159	17,246		17,246	12,322		12,322
Non-hedges		-6,535	-6,535		-7,977	-7,977		-5,825	-5,825
Forward foreign exchange contracts and swaps									
Cash flow hedges	14,079	-126	13,953	13,340	-115	13,225	15,050	-240	14,810
Non-hedges	1,206	-24	1,182	1,119	-86	1,033	2,657	-149	2,508
Cross-currency swaps									
Non-hedges	12,281	-6,656	5,625	8,760	-26,912	-18,152	15,084	-21,373	-6,289
Total	39,740	-42,927	-3,187	40,464	-60,474	-20,010	45,113	-48,185	-3,073

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

TVO Group debt structure by maturity

30 Jun 2020

EUR 1,000	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029-	Total
Loans from financial institutes	104,206	49,498	219,699	650,608	26,104	26,104	26,104	26,104	11,818		1,140,245
Public bonds		153,781	250,561	500,000	644,900	500,000	650,000	75,000		88,000	2,862,242
Loans from other sources	79,114		56,117								135,231
Lease liabilities	1,002	1,973	1,951	1,950	1,791	43,546					52,213
Commercial papers	157,933										157,933
Total	342,255	205,252	528,328	1,152,558	672,795	569,650	676,104	101,104	11,818	88,000	4,347,863

TVO Group credit commitment by maturity

30 Jun 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											
Total			300,000	1,000,000							1,300,000

EUR 75 million has been drawn from the EUR 300 million syndicated revolving credit facility.

The average interest rate on loans and derivatives on 30 June 2020 was 1.61% (31 Dec 2019: 1.63%).

On 30 June 2020, the Group had undrawn credit facilities amounting to EUR 1,225 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 158 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	30 Jun 2020		
	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments, no hedge accounting		13,487	
Derivative financial instruments designated as cash flow hedges		14,095	
Derivative financial instruments designated as fair value hedges		12,159	
Fund units			
Investments in other shares ¹⁾			1,934
Total		39,740	1,934
Financial liabilities at fair value			
Derivative financial instruments at fair value through profit or loss		13,215	
Derivative financial instruments designated as cash flow hedges		29,713	
Derivative financial instruments designated as fair value hedges			
Total		42,927	

¹⁾ On 30 June 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 at fair value through profit or loss		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

			30 Jun 2020
EUR 1,000	Financial liabilities measured at amortized cost	Book value	Fair value
Non-current liabilities			
Other financial liabilities ¹⁾	3,807,416	3,807,416	3,841,810

			31 Dec 2019
EUR 1,000	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	30 Jun 2020	30 Jun 2019	31 Dec 2019
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	1,039,378	989,255	1,040,826
Provision related to nuclear waste management (non-current liabilities)	1,039,378	989,255	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	30 Jun 2020	30 Jun 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 June 30, 2020 is EUR 1,471.4 million. The carrying amount in the balance sheet is EUR 1,039.4 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	30 Jun 2020	30 Jun 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	95,880	77,980	77,980

Investment commitments

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

EUR 1,000	30 Jun 2020	30 Jun 2019	31 Dec 2019
OL1 and OL2	95,700	73,900	80,600
OL3	425,100	369,700	411,800
Total	520,800	443,600	492,400

Pending Court Cases and Disputes

Pending Court Cases and Disputes are to be found on page 7.