

JANUARY-JUNE 2018

# INTERIM REPORT



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## Teollisuuden Voima Oyj's Interim Report January 1–June 30, 2018

During the first half of 2018, Teollisuuden Voima's (TVO) electricity generation at Olkiluoto 1 and Olkiluoto 2 plant units continued safely and reliably. At Olkiluoto 3 EPR, the hot functional testing was completed in May. According to the schedule updated by the plant supplier, the regular electricity generation at OL3 EPR plant unit will start in September 2019. The excavation works of Posiva's final disposal facility proceeded according to plan.

### Operating Environment

In January 2018, the Ministry of Finance requested an opinion on a draft bill aimed at amending the provision in the legislation on taxation of business income, which limits the right to deduct interest. In its opinion, TVO has proposed amendments to the draft bill to avoid additional burden to the energy sector. The bill is to enter into force at the beginning of 2019.

Preparation of the "Clean Energy for all Europeans" package published by the European Commission in November 2016 continues. From the nuclear industry's perspective, the most relevant legislative proposals of the Clean Energy package are energy efficiency directive, renewable energy directive, electricity directive & regulation, and regulation on the governance of the Energy Union.

Trilogue negotiations between the Commission, Parliament and Council on the final versions of the directives and regulations began in February 2018. In June, agreement was reached on the 32 percent target for the share of renewable energy sources by 2030. As regards energy efficiency, a 32.5 percent improvement target by 2030 was agreed. Trilogue negotiations on the electricity market design began in late June. In the negotiations, e.g. the rules on capacity mechanisms will be decided.

### 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–June 30, 2018 was EUR 166.7 (January 1–June 30, 2017: EUR 158.1 million). The amount of electricity delivered to shareholders was 6,813.5 (6,314.3) GWh. The slightly higher delivery volume to shareholders was due to

higher delivery volumes of both the Olkiluoto plant units and the Meri-Pori coal-fired power plant compared to the previous year.

The consolidated profit/loss was EUR -10.8 (-10.8) million.

## Financing and Liquidity

TVO's financial situation has developed as planned.

TVO's liabilities (non-current and current) at the end of the period in review, excluding the loan from the Finnish State Nuclear Waste Management Fund relented to shareholders, totaled EUR 4,562.2 (December 31, 2017: 4,412.0) million, of which EUR 579.3 (579.3) million were subordinated shareholder loans. During the period under review, TVO raised a total of EUR 400.0 (100.0) million in non-current liabilities. Repayments during the period under review amounted to EUR 371.8 (175.9) million.

In April, TVO issued a EUR 400 million bond. The maturity of the bond is six years and the coupon 2%. EUR 306.5 million of the proceeds from the bond were used for the partial repurchase of the EUR 500 million bond maturing in February 2019.

In February, Japan Credit Rating Agency downgraded TVO's long term rating from AA- to A+ and assessed the outlook as stable. In October 2017, Standard & Poor's (S&P) placed TVO's long term issuer rating (BB+) on CreditWatch with negative outlook. In March 2018, S&P removed the rating from CreditWatch Negative and assessed TVO's outlook as stable.

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 June 30, 2018 the amount of the loan was EUR 666.2 (December 31, 2017: 655.5) million and it has been relented to the Company's A-series shareholders. On March 31, 2018, the loan from the Finnish State Nuclear Waste Management Fund was increased by EUR 10.7 (-371.5) million.

## Nuclear Power

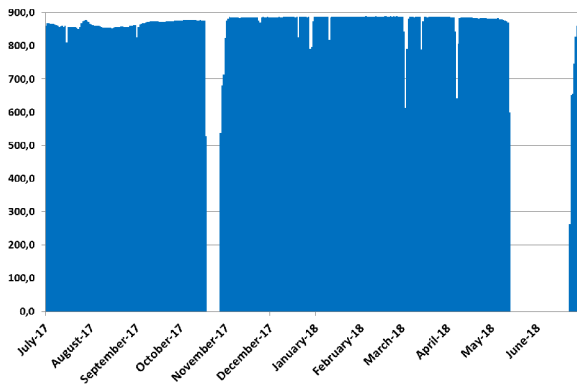
### Olkiluoto 1 and Olkiluoto 2

The electricity production of the Olkiluoto power plant units Olkiluoto 1 (OL1) and Olkiluoto 2 (OL2) during the period under review was 6,458 (6,286) GWh. The total load factor was 84.2 (82.4) %.

The plant units operated safely and reliably during the period under review. OL1's net production was 2,932 (3,524) GWh and the load factor 76.9 (92.5) %. OL2's net production was 3,526 (2,762) GWh and the load factor 91.4 (72.4) %.

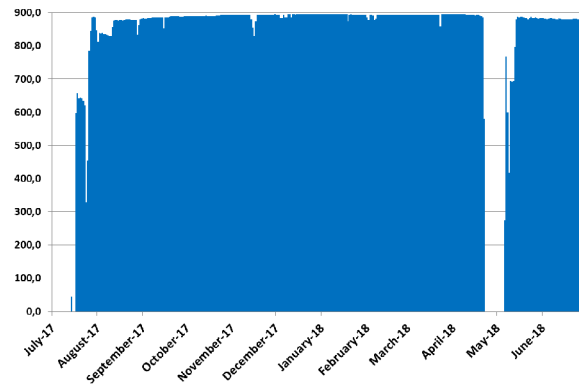
### Olkiluoto 1

Average electrical power MW  
July 1, 2017–June 30, 2018



### Olkiluoto 2

Average electrical power MW  
July 1, 2017–June 30, 2018



In January 2017, TVO filed with the Ministry of Economic Affairs and Employment (MEAE) an application for the renewal of the operating license of OL1 and OL2. The renewal of the operating license is applied for until the end of 2038. The 20-year operating license currently in force must be renewed by the end of 2018.

At the end of May, the Radiation and Nuclear Safety Authority (STUK) issued a positive statement to MEAE on renewing the operating license for the OL1 and OL2 plant units. Government decision on the operating license renewal is expected in the autumn.

### Annual outages

The 2018 annual outages of the Olkiluoto nuclear power plant were started on April 23 with a refueling outage at OL2. In addition to refueling, the OL2 outage also included annually recurring maintenance work as well as completion of the installation of a new alternative coolant injection system. The outage lasted more than 13 days.

At OL1, the annual outage commenced on May 13 and was completed on June 23. The most important work of the outage at the plant unit included replacement of the main internals pumps and their frequency converters, renewal of turbine condensers, installation of a new alternative coolant injection system, high-pressure drain forward pumping, and replacement of the high-pressure preheaters and feedwater distributors. A containment leak-tightness test was also carried out.

In addition to TVO's own personnel, up to 1,400 contractor employees took part in the 2018 annual outage works.

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.

### Olkiluoto 3 EPR

Olkiluoto 3 EPR (OL3 EPR), a nuclear power plant unit 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 accordance with the Supplier's schedule updated in June 2018, regular electricity generation at the plant unit will commence in September 2019. According to the Supplier, fuel will be loaded into the reactor in January 2019, and the first connection to the grid will take place in May 2019. According to the Supplier's plant ramp-up program, the unit will produce 2–4 TWh of electricity, at varying power levels, during the period of time between the first connection to the grid and the start of regular electricity production.

The construction work of the plant unit is mainly finished. Electrical, instrumentation and control (I&C) and mechanical installations are still partly in progress. Simulator training for the operating personnel commenced in February 2017. The hot functional testing was completed in May 2018. In the hot functional tests, the nuclear and turbine island operated for the first time together as an entity. Overall, more than two hundred different tests were carried out at different pressure and temperature levels during the hot functional testing. The workforce at the site at the end of the period under review was about 2,100 persons. Occupational safety at the site remained at a good level.

The business restructuring plan announced by Areva in 2016 was implemented at the beginning of 2018. The majority of Areva NP's business was transferred to a company named Framatome, of which 75.5 percent is owned by Electricité de France (EDF). The OL3 EPR project and the means required to complete the project, as well as certain other liabilities remained within Areva NP and Areva GmbH.

A comprehensive settlement agreement between TVO and the OL3 EPR plant supplier consortium companies was signed and it came into force in March 2018. The settlement agreement concerns the completion of the OL3 EPR project and related disputes. The agreement is described in more detail in the paragraph "Pending Court Cases and Disputes".

All the 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 34.1 (31.2) million and the amount consumed to EUR 27.6 (24.0) million.

The nuclear fuel and uranium stock carrying value on June 30, 2018 was EUR 248.2 (December 31, 2017: 241.7) 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 966.3 (December 31, 2017: 953.1) 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. In December 2017, MEAE set TVO's liability for nuclear waste management at EUR 1,481.6 (1,450.1) million to the end of 2017 and the Company's funding target for 2018 at EUR 1,470.8 (1,428.4) million.

In March 2018, the Finnish State Nuclear Management Fund confirmed TVO's nuclear waste management fee for 2017 at EUR 33.6 (49.1) million, which was paid into the Fund on March 31, 2018 (March 31, 2017). The nuclear waste management fee for 2018 will be confirmed in March 2019.

## Final Disposal of Spent Nuclear Fuel

Posiva Oy is in charge of executing in Olkiluoto the final disposal of the spent nuclear fuel generated by its owners, TVO at its power plant in Olkiluoto and Fortum at its power plant in Loviisa.

Suppliers of the main encapsulation building equipment have been selected, and the design phase of the main equipment has progressed according to plan. In addition, the decision to construct the encapsulation building is under preparation.

The excavation work of the final disposal facility itself was launched in December 2016. Excavation of the vehicle access tunnels leading to the final disposal facility and excavation of the central tunnel for the integrated systems test have been completed. Raise boring of the canister shaft has been started. Preparation for the full-scale in-situ system test (FISST) continued, and the test was commenced at the end of June. The aim of the FISST is to demonstrate that safe final disposal can be implemented as designed by Posiva. The test is monitored for several years.

At the end of March, Posiva's owners submitted the Nuclear Waste Management Annual Report for 2017 to the Ministry of Economic Affairs and Employment (MEAE).

## Coal Power

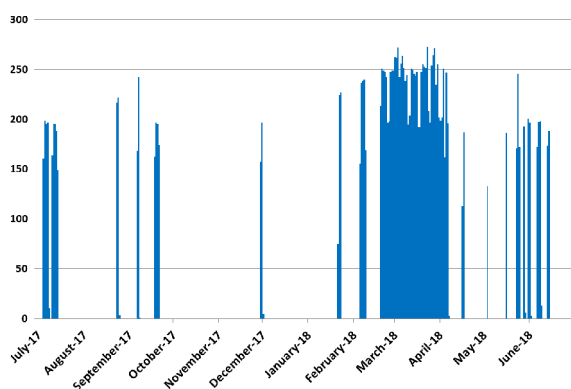
### Meri-Pori

The amount of electricity produced by TVO's share at the Meri-Pori coal-fired power plant on January 1–June 30, 2018 was 369.2 (44.5) GWh requiring 134.5 (15.4) thousand tons of coal and 266.4 (36.9) thousand tons of carbon dioxide emission rights.

### TVO's share of Meri-Pori's production

Average electrical power MW

July 1, 2017–June 30, 2018



TVO and its shareholders have agreed on ownership arrangements of shares entitling to a share of Meri-Pori power plant's production capacity. According to the agreement signed in June, Fortum will acquire TVO's shareholders' shares of the production capacity of the Meri-Pori 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.

## Acquisitions of Tangible and Intangible Assets and Shares

Investments during the period under review were EUR 147.6 (151.9) million. Investments of the parent company were EUR 145.1 (151.0) million, of which EUR 111.9 (103.7) million were allocated to the OL3 project.

Carbon dioxide emission rights have been relinquished to the Energy Market authority worth EUR 0.7 (2.7) million. During the period under review, emission rights were acquired worth EUR 3.7 (0.1) 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

According to the comprehensive settlement agreement signed in March 2018, TVO and the Supplier jointly withdrew the pending arbitration proceedings under the International Chamber of Commerce (ICC) rules with respect to costs and losses incurred in relation to delays in the construction of the OL3 EPR project. In June 2018, the ICC tribunal confirmed the arbitration settlement by a consent award, and the arbitration proceedings were terminated. The parties also withdrew the pending appeals in the General Court of the European Union.

The settlement agreement between TVO and 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, concerning the completion of the OL3 EPR project and related disputes entered into force late March.

The settlement agreement stipulates that:

In order to provide and maintain adequate and competent technical and human resources for the completion of the OL3 EPR project, Areva will source the necessary additional resources from Framatome S.A.S., whose majority owner is Electricité de France (EDF).

The supplier consortium companies undertake 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.

The turnkey principle of the OL3 EPR plant contract and the joint and several liability of the supplier consortium companies remain in full force.

The agreement also noted the plant supplier's schedule at the time the agreement was signed, according to which the regular electricity production in the unit would have commenced in May 2019.

The ICC arbitration concerning the costs and losses caused by the delay of the OL3 EPR project is settled by financial compensation of EUR 450 million to be paid to TVO in two installments by the supplier consortium companies.

The parties withdraw all on-going legal actions related to OL3 EPR, including the ICC arbitration and appeals in the General Court of the European Union.

The supplier consortium companies are entitled to receive an incentive payment, in a maximum amount of EUR 150 million, upon timely completion of the OL3 EPR project. In the event that the supplier consortium companies fail to complete the OL3 EPR project by the end of 2019, they will pay a penalty to TVO for such delay in an amount which will depend on the actual time of completion of the OL3 EPR project and may not exceed EUR 400 million.



TVO received the first payment of EUR 328 million of the settlement amount in March at the entry into force of the settlement agreement. The second payment of EUR 122 million is payable upon completion of the OL3 EPR project or, in any event, on December 31, 2019 at the latest. In the first quarter of 2018, TVO made a provision of EUR 150 million reflecting the maximum amount of the incentive payment payable to the supplier consortium companies for timely completion of the OL3 EPR project. In June 2018, TVO received from Areva–Siemens Consortium an updated schedule for the commissioning of the OL3 plant unit. According to the received information, the regular electricity generation at OL3 will start in September 2019, so, in the second quarter of 2018, the provision was withdrawn by EUR 50 million. These settlement payments to TVO, any incentive payment by TVO and any penalty payable to TVO due to any additional project delay have all been taken into account in calculating the final cost of the OL3 EPR project. The amount corresponding to the settlement amount and the incentive fee to be paid by TVO have been entered as property, plant and equipment in the Group balance sheet.

## Personnel

The total number of personnel in the Group at the end of the period under review was 917 (December 31, 2017: 807, June 30, 2017: 850). The number of permanent employees in the Group at the end of the period under review was 807 (December 31, 2017: 784, June 30, 2017: 756).

As the operating phase of OL3 EPR is approaching, the organizations of Electricity Production and Engineering and Expert Services are being strengthened with several dozens of technical professionals.

The Group's management and operational culture is being developed with the help of the Better workplace project. The goals of the project include improving efficiency of operations and securing good preconditions for operations by developing issues related to the work of each individual, the immediate work community and the entire Group. The progress of the project is monitored on a regular basis and the project's effectiveness is measured with e.g. regular personnel surveys.

The collective agreements for different groups of personnel in the energy industry ended on January 31, 2018. New agreements are in force in accordance with the so called framework agreement of labor confederations for salaried employees until the end of January 2020, for workers until the end of March 2020, and for senior salaried employees until the end of January 2021.

## Annual General Meeting

TVO's Annual General Meeting on March 31, 2018 approved the financial statements for 2017, confirmed the consolidated income statement and balance sheet, and discharged the members of the Board of Directors and the President and CEO from liability.

All Board members were re-elected. At its organization meeting, the Board elected Matti Ruotsala as Chairman and Lauri Virkkunen as Deputy Chairman. The Board also chose from among its members the members and chairmen of the Board Committees.

### Extraordinary General Meeting

At TVO's Extraordinary General Meeting held in June 2018, TVO and its shareholders agreed on ownership arrangements of shares entitling to a share of Meri-Pori power plant's production capacity. TVO will relinquish its share in Meri-Pori in full in the beginning of July 2020. Because of the arrangements the EGM decided to amend the Articles of Association by removing all provisions pertaining Meri-Pori shares and to reduce the share capital by the proportionate amount of share capital allocated to these shares (class C shares.) The amendments of the Articles of Association will be registered at the same time as the decrease in the share capital is registered. The other amendments to the Articles of Association will be registered when the cancellation of class C shares is registered.

### 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 2017 Report of the Board of Directors.

During the period under review, no remarkable new risks connected with the Company's operation have arisen.

### Assessment of Year-End Developments

Electricity production is expected to continue as in previous years. The prerequisites for nuclear power production at Olkiluoto are good. Procedures for the operating license renewal of the OL1 and OL2 plant units will be completed in the second half of the year. Nuclear fuel availability is guaranteed by long-term agreements.

Preparing the OL3 EPR plant unit for production use will continue with TVO supporting the Supplier to complete the project. After the hot functional tests, preparation for the fuel loading which will take several months was launched at OL3 EPR. TVO will submit to the authorities a number of supplementary documents relating mainly to the findings of the heat functional testing. After this TVO has the prerequisites to obtain STUK's opinion and safety assessment as well as the Government's decision on the license.

The Meri-Pori coal-fired power plant capacity will be used in 2018 in accordance with the former principles. Fortum's share of the Meri-Pori power plant has been accepted into the reserve capacity.

The concept and cost optimization phase of Posiva's final disposal project will continue until the end of 2018. The full-scale in-situ system test (FISST) in ONKALO will continue during 2018.

#### Events after the Period under Review

No major events have taken place after the end of the interim report period.

July 17, 2018

Teollisuuden Voima Oyj  
Board of Directors

## Key figures of TVO Group

TVO GROUP (IFRS) (M€)	1.1. - 30.6.2018	1.1. - 30.6.2017	1.1. - 31.12.2017
Turnover	167	158	321
Profit/loss for the period	-11	-11	-9
Investments <sup>1)</sup>	148	152	299
Equity	1 656	1 572	1 667
Subordinated shareholder loans (hybrid equity) (included in the former) <sup>3)</sup>	579	479	579
Non-current and current interest-bearing liabilities (excluding loan from VYR) <sup>2)</sup>	4 065	4 018	3 923
Loan from VYR <sup>2)</sup>	666	656	656
Provision related to nuclear waste management	966	966	953
Obligatory provisions	100	0	0
Balance sheet total	7 591	7 365	7 374
Equity ratio % <sup>4)</sup>	27,8	27,4	28,9
Average number of personnel	865	795	801

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

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

<sup>3)</sup> Subordinated loans

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

## Key figures of Teollisuuden Voima Oyj

### TEOLLISUUDEN VOIMA OYJ (FAS) (M€)

1.1. - 30.6.2018 1.1. - 30.6.2017 1.1. - 31.12.2017

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

Turnover	165	156	316
Profit/loss before appropriations	-10	-8	6
Fuel costs	34	25	57
Nuclear waste management costs	32	34	64
Capital expenditure (depreciation and financial income and expenses)	26	25	51
Investments <sup>1)</sup>	145	151	298
Equity	863	858	863
Appropriations	175	176	185
Obligatory provisions	100	0	0
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) <sup>2)</sup>	3 983	3 916	3 833
Loans from equity holders of the company <sup>3)</sup>	579	479	579
Loan from VYR <sup>2)</sup>	666	656	656
Balance sheet total	6 505	6 238	6 292
Equity ratio % <sup>4)</sup>	27,7	27,1	28,9
Average number of personnel	864	794	800

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

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

<sup>3)</sup> Subordinated loans

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

### ELECTRICITY DELIVERED TO EQUITY HOLDERS OF THE COMPANY (GWh)

1.1. - 30.6.2018 1.1. - 30.6.2017 1.1. - 31.12.2017

Nuclear power	6 445	6 270	13 385
Coal-fired power	369	44	131
Total	6 814	6 314	13 516

TVO GROUP

**Consolidated financial statement in brief and notes****Consolidated income statement**

<b>EUR 1 000</b>	<b>1.1. - 30.6.2018</b>	<b>1.1. - 30.6.2017</b>	<b>1.1. - 31.12.2017</b>
<b>Turnover</b>	<b>166 742</b>	<b>158 072</b>	<b>320 928</b>
Work performed for own purposes	8 167	6 649	12 888
Other income	6 042	5 979	11 844
Materials and services	-55 109	-47 330	-120 911
Personnel expenses	-34 002	-30 900	-57 728
Depreciation and impairment charges	-27 213	-27 177	-54 385
Other expenses	-54 156	-55 206	-92 717
<b>Operating profit/loss</b>	<b>10 471</b>	<b>10 087</b>	<b>19 919</b>
Finance income	6 007	6 408	12 239
Finance expenses	-27 699	-27 450	-42 881
Total finance income and expenses	-21 692	-21 042	-30 642
Share of the profit/loss of joint ventures	393	191	1 290
<b>Profit/loss before income tax</b>	<b>-10 828</b>	<b>-10 764</b>	<b>-9 433</b>
Income taxes	0	0	2
<b>Profit/loss for the period</b>	<b>-10 828</b>	<b>-10 764</b>	<b>-9 431</b>
<b>Profit/loss for the period attributable to:</b>			
Equity holders of the company	-10 828	-10 764	-9 431

**Consolidated statement of comprehensive income**

<b>EUR 1 000</b>	<b>1.1. - 30.6.2018</b>	<b>1.1. - 30.6.2017</b>	<b>1.1. - 31.12.2017</b>
Profit/loss for the period	-10 828	-10 764	-9 431
Other comprehensive items			
Items that may be reclassified to profit or loss in subsequent periods:			
Changes in fair values of the available-for-sale investments	0	324	-14
Cash flow hedges	1 826	-4 526	-9 181
Total other comprehensive profit/loss items for the period	1 826	-4 202	-9 195
<b>Total comprehensive profit/loss for the period</b>	<b>-9 002</b>	<b>-14 966</b>	<b>-18 626</b>
<b>Total comprehensive profit/loss for the period attributable to:</b>			
Equity holders of the company	-9 002	-14 966	-18 626



## TVO GROUP

**Consolidated statement of financial position**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	5 376 383	5 157 405	5 261 866
Intangible assets	6 985	4 709	4 662
Loans and other receivables	791 402	658 776	658 679
Investments in joint ventures	4 995	3 503	4 602
Investments in shares	1 934	1 934	1 934
Derivative financial instruments	27 713	63 733	35 291
Share in the Finnish State Nuclear Waste Management Fund	966 286	966 144	953 136
<b>Total non-current assets</b>	<b>7 175 698</b>	<b>6 856 204</b>	<b>6 920 170</b>
<b>Current assets</b>			
Inventories	257 580	257 080	257 090
Trade and other receivables	37 383	37 032	41 373
Derivative financial instruments	18 303	4 614	14 670
Fund units	0	100 338	0
Cash and cash equivalents	102 470	110 124	140 239
<b>Total current assets</b>	<b>415 736</b>	<b>509 188</b>	<b>453 372</b>
<b>Total assets</b>	<b>7 591 434</b>	<b>7 365 392</b>	<b>7 373 542</b>
<b>Equity and liabilities</b>			
<b>Capital and reserves attributable to equity holders of the company</b>			
Share capital	606 193	606 193	606 193
Share premium reserve and statutory reserve	242 383	242 383	242 383
Fair value and other reserves	-2 649	518	-4 475
Subordinated shareholder loans (hybrid equity)	579 300	479 300	579 300
Retained earnings	230 345	244 019	243 293
<b>Total equity</b>	<b>1 655 572</b>	<b>1 572 413</b>	<b>1 666 694</b>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Provision related to nuclear waste management	966 286	966 144	953 136
Obligatory provisions	100 000	0	0
Loan from the Finnish State Nuclear Waste Management Fund	666 242	655 518	655 518
Bonds	2 408 884	2 739 386	2 525 834
Other financial liabilities	930 944	1 073 401	943 997
Derivative financial instruments	33 010	54 777	24 360
<b>Total non-current liabilities</b>	<b>5 105 366</b>	<b>5 489 226</b>	<b>5 102 845</b>
<b>Current liabilities</b>			
Current financial liabilities	647 502	147 994	392 540
Derivative financial instruments	44 928	2 567	35 934
Advance payments received	40 404	41 610	40 178
Trade payables	10 422	22 111	6 160
Other current liabilities	87 240	89 471	129 191
<b>Total current liabilities</b>	<b>830 496</b>	<b>303 753</b>	<b>604 003</b>
<b>Total liabilities</b>	<b>5 935 862</b>	<b>5 792 979</b>	<b>5 706 848</b>
<b>Total equity and liabilities</b>	<b>7 591 434</b>	<b>7 365 392</b>	<b>7 373 542</b>

## TVO GROUP

**Consolidated statement of changes in equity**

<b>EUR 1 000</b>	<b>Share capital</b>	<b>Share premium reserve and statutory reserve</b>	<b>Fair value and other reserves</b>	<b>Subordinated shareholder loans (hybrid equity)</b>	<b>Retained earnings</b>	<b>Attributable to equity holders of the company</b>	<b>Total equity</b>
<b>Equity 1.1.2018</b>	<b>606 193</b>	<b>242 383</b>	<b>-4 475</b>	<b>579 300</b>	<b>243 293</b>	<b>1 666 694</b>	<b>1 666 694</b>
Profit/loss for the period	0	0	0	0	-10 828	-10 828	-10 828
Other comprehensive items:							
Changes in fair values of the available-for-sale investments	0	0	0	0	0	0	0
Cash flow hedges	0	0	1 826	0	0	1 826	1 826
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-2 120	-2 120	-2 120
<b>Equity 30.6.2018</b>	<b>606 193</b>	<b>242 383</b>	<b>-2 649</b>	<b>579 300</b>	<b>230 345</b>	<b>1 655 572</b>	<b>1 655 572</b>

<b>EUR 1 000</b>	<b>Share capital</b>	<b>Share premium reserve and statutory reserve</b>	<b>Fair value and other reserves</b>	<b>Subordinated shareholder loans (hybrid equity)</b>	<b>Retained earnings</b>	<b>Attributable to equity holders of the company</b>	<b>Total equity</b>
<b>Equity 1.1.2017</b>	<b>606 193</b>	<b>242 383</b>	<b>4 720</b>	<b>479 300</b>	<b>256 656</b>	<b>1 589 252</b>	<b>1 589 252</b>
Profit/loss for the period	0	0	0	0	-10 764	-10 764	-10 764
Other comprehensive items:							
Changes in fair values of the available-for-sale investments	0	0	324	0	0	324	324
Cash flow hedges	0	0	-4 526	0	0	-4 526	-4 526
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-1 873	-1 873	-1 873
<b>Equity 30.6.2017</b>	<b>606 193</b>	<b>242 383</b>	<b>518</b>	<b>479 300</b>	<b>244 019</b>	<b>1 572 413</b>	<b>1 572 413</b>

## TVO GROUP

**Consolidated statement of cash flows**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
<b>Operating activities</b>			
Profit/loss for the period	-10 828	-10 764	-9 431
Adjustments:			
Income tax expenses	0	0	-2
Finance income and expenses	21 692	21 042	30 642
Depreciation and impairment charges	27 213	27 177	54 385
Share of the profit/loss of joint ventures	-393	-191	-1 290
Other non-cash flow income and expenses	-22 150	-19 186	-15 683
Sales profit/loss of property, plant and equipment and shares	0	-225	-224
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	1 903	5 972	4 097
Increase (-) or decrease (+) in inventories	-489	-6 406	-7 666
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	-11 236	-26 983	-26 366
Interest paid and other finance expenses	-1 905	-2 454	-4 260
Interest received	3 855	5 723	5 734
Taxes paid	0	0	2
<b>Cash flow from operating activities</b>	<b>7 662</b>	<b>-6 295</b>	<b>29 938</b>
<b>Investing activities</b>			
Acquisition of property, plant and equipment	-192 841	-166 494	-287 195
Proceeds from sale of property, plant and equipment	0	0	41
Acquisition of intangible assets	-19	-104	-143
Acquisition of shares	0	-6	-6
Investments in fund units	0	100 000	200 000
Proceeds from sale of shares	0	416	486
Loan receivables granted	-10 725	-15 517	-15 603
Repayments of loans granted	0	387 049	387 278
<b>Cash flow from investing activities</b>	<b>-203 585</b>	<b>305 344</b>	<b>284 858</b>
<b>Financing activities</b>			
Withdrawals of subordinated shareholder loans (hybrid equity)	0	0	100 000
Withdrawals of long-term loans	410 725	100 000	100 000
Repayment of long-term loans	-372 612	-548 310	-632 135
Interest paid of subordinated shareholder loans (hybrid equity)	-1 907	-1 904	-3 710
Increase (+) or decrease (-) in current financial liabilities	121 948	-50 947	-50 948
<b>Cash flow from financing activities</b>	<b>158 154</b>	<b>-501 161</b>	<b>-486 793</b>
<b>Change in cash and cash equivalents</b>	<b>-37 769</b>	<b>-202 112</b>	<b>-171 997</b>
Cash and cash equivalents at the beginning of period	140 239	312 236	312 236
<b>Cash and cash equivalents at the end of period</b>	<b>102 470</b>	<b>110 124</b>	<b>140 239</b>

TVO GROUP

## 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 2017. Additionally the changes according to the revised IAS/IFRS standards have been adopted.

### 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 2017.

### Meri-Pori

TVO and its shareholders have agreed on ownership arrangements of shares entitling to a share of Meri-Pori power plant's production capacity. According to the agreement signed in June, Fortum will acquire TVO's shareholders' shares of the production capacity of the Meri-Pori 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.

### Oikiluoto 3 EPR

According to the comprehensive settlement agreement signed in March 2018, TVO and the Supplier jointly withdrew the pending arbitration proceedings under the International Chamber of Commerce (ICC) rules with respect to costs and losses incurred in relation to delays in the construction of the OL3 EPR project. In June 2018, the ICC tribunal confirmed the arbitration settlement by a consent award, and the arbitration proceedings were terminated. The parties also withdrew the pending appeals in the General Court of the European Union. The settlement agreement between TVO and 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, concerning the completion of the OL3 EPR project and related disputes entered into force late March.

These settlement payments to TVO, any incentive payment by TVO and any penalty payable to TVO due to any additional project delay have all been taken into account in calculating the final cost of the OL3 EPR project. The amount corresponding to the settlement amount and the incentive fee to be paid by TVO have been entered as property, plant and equipment in the Group balance sheet.

## TVO GROUP

**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.

**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**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Nuclear power	149 242	152 342	307 561
Coal-fired power	17 500	5 730	13 367
<b>Total</b>	<b>166 742</b>	<b>158 072</b>	<b>320 928</b>

**Profit/loss for the period by segments**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Nuclear power	-9 794	-5 669	10 597
Coal-fired power	-211	-1 671	-3 402
Profit/loss before appropriations (FAS)	-10 005	-7 340	7 195
The impact of the nuclear waste management obligation	-1 647	-4 286	-19 032
The impact of financial instruments	58	90	37
Other IFRS adjustments	373	581	1 079
Share of the profit/loss of joint ventures	393	191	1 290
<b>Total (IFRS)</b>	<b>-10 828</b>	<b>-10 764</b>	<b>-9 431</b>

**Assets by segments**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Nuclear power	6 505 854	6 227 168	6 286 732
Coal-fired power	76	11 415	5 744
Total (FAS)	6 505 930	6 238 583	6 292 476
The impact of the nuclear waste management obligation	1 041 352	1 057 604	1 029 849
The impact of financial instruments	7 498	28 692	12 348
The impact of finance leases	54 028	55 733	54 889
Other IFRS adjustments	-21 358	-17 712	-19 611
Share of the profit/loss of joint ventures	3 984	2 492	3 591
<b>Total (IFRS)</b>	<b>7 591 434</b>	<b>7 365 392</b>	<b>7 373 542</b>

## TVO GROUP

**Changes in property, plant and equipment**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
<b>Opening net book amount</b>	<b>5 261 866</b>	<b>5 040 266</b>	<b>5 040 266</b>
Increase	143 865	151 644	298 600
Decrease	-2 919	-8 061	-31 063
Depreciation and impairment charges	-26 492	-26 550	-53 130
Accumulated depreciation from deduction	63	106	7 193
<b>Closing net book amount</b>	<b>5 376 383</b>	<b>5 157 405</b>	<b>5 261 866</b>

**Changes in intangible assets**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
<b>Opening net book amount</b>	<b>4 662</b>	<b>7 758</b>	<b>7 758</b>
Increase	3 721	239	821
Decrease	-677	-2 661	-2 662
Depreciation and impairment charges	-721	-627	-1 255
<b>Closing net book amount</b>	<b>6 985</b>	<b>4 709</b>	<b>4 662</b>



## TVO GROUP

**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 2017.

**Derivative financial instruments**

Nominal values of the derivative financial instruments \*

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Interest rate swaps	2 449 518	2 449 518	2 499 518
Forward foreign exchange contracts and swaps <sup>1)</sup>	126 002	147 781	142 709
Cross-currency swaps	642 418	696 181	642 395
<b>Total</b>	<b>3 217 938</b>	<b>3 293 480</b>	<b>3 284 622</b>

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

<b>EUR 1 000</b>	<b>30.6.2018</b>			<b>30.6.2017</b>			<b>31.12.2017</b>		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Fair values of the derivative financial instruments *									
Interest rate swaps									
Cash flow hedges		-12 937	-12 937		-18 571	-18 571	382	-14 738	-14 356
Fair value hedges	15 370	-379	14 991	23 480	-1 628	21 852	19 155	-1 565	17 591
Non-hedges	172	-2 425	-2 253						
Forward foreign exchange contracts and swaps									
Cash flow hedges	11 177	-1 261	9 916	18 045	-1 199	16 846	12 033	-2 663	9 370
Non-hedges	478	-113	365	788	-246	542	715	-224	491
Cross-currency swaps									
Non-hedges	18 820	-60 824	-42 004	26 034	-35 700	-9 666	17 676	-41 105	-23 429
<b>Total</b>	<b>46 016</b>	<b>-77 937</b>	<b>-31 921</b>	<b>68 347</b>	<b>-57 344</b>	<b>11 003</b>	<b>49 961</b>	<b>-60 294</b>	<b>-10 333</b>

\* Cross-currency swaps related to Private Placements included.

**TVO Group debt structure  
30 June 2018**

<b>EUR 1 000</b>	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027-	Total
Loans from financial institutes	29 206	44 413	144 413	135 213	405 413	30 413					789 070
Public bonds	228 519	251 719	131 955	500 000	153 000	500 000	420 000	500 000		163 000	2 848 192
Loans from other sources	88 446		79 114		56 117						223 677
Finance lease liabilities	860	1 726	1 735	1 744	1 752	1 761	1 770	43 544			54 892
Commercial papers	121 949										121 949
<b>Total</b>	<b>468 981</b>	<b>297 858</b>	<b>357 216</b>	<b>636 956</b>	<b>616 282</b>	<b>532 174</b>	<b>421 770</b>	<b>543 544</b>		<b>163 000</b>	<b>4 037 781</b>

## TVO GROUP

### Maturity of TVO Group's credit commitments 30 June 2018

EUR 1 000	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027-	Total
Syndicated revolving credit facility				300 000		1 000 000					1 300 000
Bilateral revolving credit facility											
Bilateral bank loan		100 000									100 000
<b>Total</b>		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 30 June 2018 was 1.95% (2017: 2.15%).

On June 30, 2018, the Group had undrawn credit facilities amounting to EUR 1,400 million (2017: EUR 1,680 million). In addition, the Group had subordinated shareholder loan (hybrid equity) commitments totaling EUR 350 million (2017: EUR 350 million) and cash and cash equivalents amounting to EUR 102 million (2017: EUR 140 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.

## TVO GROUP

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

EUR 1 000	30.6.2018			31.12.2017		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
<b>Financial assets at fair value</b>						
Derivative financial instruments at fair value through profit or loss		19 469			18 391	
Derivative financial instruments designated as cash flow hedges		11 177			12 414	
Derivative financial instruments designated as fair value hedges		15 370			19 155	
Equity and fund units investments						
Investments in other shares <sup>1)</sup>			1 934			1 934
<b>Total</b>		<b>46 016</b>	<b>1 934</b>		<b>49 961</b>	<b>1 934</b>
<b>Financial liabilities at fair value</b>						
Derivative financial instruments at fair value through profit or loss		63 361			41 329	
Derivative financial instruments designated as cash flow hedges		14 198			17 401	
Derivative financial instruments designated as fair value hedges		379			1 565	
<b>Total</b>		<b>77 937</b>			<b>60 294</b>	

<sup>1)</sup> On 30 June 2018, TVO has unquoted shares worth EUR 1,934 (2017:1,934) thousand. Direct market prices are not available for unquoted shares and therefore their fair value is determined using methods based on management judgement.

**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.

**Book values of financial assets and liabilities by categories**

EUR 1 000	30.6.2018			31.12.2017		
	Financial liabilities measured at amortized cost	Book Value	Fair value	Financial liabilities measured at amortized cost	Book Value	Fair value
Non-current liabilities						
Other financial liabilities*	3 339 828	3 339 828	3 437 607	3 469 831	3 469 831	3 581 560

\*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.

## TVO GROUP

**Assets and provision related to nuclear waste management obligation**

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

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	966 286	966 144	953 136
Provision related to nuclear waste management (non-current liabilities)	966 286	966 144	953 136

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

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Liability for nuclear waste management according to the Nuclear Energy Act	1 481 600	1 450 100	1 481 600
Funding target obligation	1 470 800	1 428 400	1 470 800
TVO's share in the Finnish State Nuclear Waste Management Fund	1 470 800	1 428 400	1 436 600
Difference between the liability and TVO's share of the fund	10 800	21 700	45 000

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

TVO contributes funds to the Finnish State Nuclear Waste Management Fund to cover future obligations based on the legal liability calculated according to the Nuclear Energy Act. The difference between the funding obligation target decided by the Ministry of Economic Affairs and Employment (MEAE) and TVO's actual share of the Finnish State Nuclear Waste Management Fund is paid in Q1 each year. TVO's share in the Finnish State Nuclear Waste Management Fund on June 30, 2018 is EUR 1,470.8 million. The carrying amount in the balance sheet is EUR 966.3 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.

The Ministry of Economic Affairs and Employment (MEAE) has adopted the procedure mentioned in the Nuclear Energy Act (section 40, subsection 3) and specified in the Government Decision 1339/1996 for a temporary reduction of the funding target when confirming Teollisuuden Voima Oyj's funding target obligation for 2018.

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.

TVO GROUP

**Obligations and other commitments****Pledged promissory notes and financial guarantees**

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	666 242	655 518	655 518
Guarantees given by shareholders related to the nuclear waste management obligation	135 970	187 500	187 500

**Investment commitments**

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

<b>EUR 1 000</b>	<b>30.6.2018</b>	<b>30.6.2017</b>	<b>31.12.2017</b>
OL1 and OL2	99 000	105 000	95 000
OL3	363 000	721 000	697 000
<b>Total</b>	<b>462 000</b>	<b>826 000</b>	<b>792 000</b>

**Pending Court Cases and Disputes**

Pending Court Cases and Disputes are to be found on page 8.