

Interim Report
January-June 2016

## Teollisuuden Voima Oyj's Interim Report January 1–June 30, 2016

In the first half of the year, Teollisuuden Voima's electricity generation at Olkiluoto 1 and Olkiluoto 2 plant units continued safely. At Olkiluoto 3, the process system tests were launched, and the operating license application of the plant unit was submitted to the Ministry of Employment and the Economy. Earth-moving works and excavations for Posiva's encapsulation plant started.

### Operating Environment

During the first five months of the year, the use of electricity in Finland increased by 3.9 percent compared to the corresponding period of the previous year.

In 2015, the Finnish Government launched preparation of a new energy and climate strategy. In May, a working group appointed by the Ministry of Employment and the Economy (MEE) completed its report which evaluates how renewable energy should be supported in the future. The energy and climate strategy will be submitted as a Government Report to Parliament by the end of 2016.

The European Commission's proposal for redesigning the electricity market legislation as well as the European Parliament's report on the electricity market are progressing on schedule. The Parliament will vote on the draft report in August 2016, and the Commission will most likely give its proposal in December 2016.

The European Commission published in April its communication on Nuclear Illustrative Program (PINC) to the European Parliament. In the communication, the Commission points out that as a low carbon technology and a significant contributor to security of supply and diversification, nuclear energy is expected to remain an important component of the EU's energy mix in the 2050 horizon. Currently, 27 percent of electricity in the EU is produced from nuclear energy. To improve cost-effectiveness of nuclear power plants, the Commission also highlights the development of cooperation in standardization and licensing issues.

The European Commission is currently discussing what further measures the EU should take regarding the Paris Agreement on climate change. The EU Commissioner for Climate Action and Energy believes in the efficacy of corrective actions taken to emissions trading, but the Commission aims at regular intervals to assess the need for additional measures.

#### 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. 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, 2016 was EUR 176.9 (January 1–June 30, 2015: EUR 155.9 million). The amount of electricity delivered to shareholders was 6,946.8 (6,587.1) GWh. The higher delivery volume to shareholders was due to increased delivery volumes of both Olkiluoto 2 and Meri-Pori coal-fired power plant compared to the previous year.

The consolidated profit/loss was EUR -6.6 (-1.0) million. An updated cost esimate based on a new nuclear waste management technical plan and schedule and the changes of the provision regarding nuclear waste management obligation had an effect on the profit/loss for the period under review.

#### Financing and Liquidity

TVO's financial situation has developed as planned.

TVO's liabilities (non-current and current) at the end of the period under review, excluding the loan from the Finnish State Nuclear Waste Management Fund relent to shareholders, totaled EUR 4,067.5 (December 31, 2015: 3,987.5) million, of which EUR 479.3 (479.3) million were subordinated shareholder loans. During the period under review, TVO raised a total of EUR 300.0 (500.0) million in non-current liabilities. Repayments during the period under review amounted to EUR 287.9 (152.9) million, of which EUR 0.0 (60.0) million were subordinated shareholder loans.

In February, Japan Credit Rating Agency (JCR) kept unchanged its AA- rating for TVO and evaluated the Company's future outlook as stable. In May, Fitch Ratings affirmed its previous rating BBB for TVO but changed the Company's outlook to negative. Standard & Poor's downgraded in May TVO's rating from BBB- to BB+ and assessed the outlook as stable.

In February, TVO signed a new revolving credit facility (the "Facility") of EUR 1,300 million. The Facility refinances TVO's existing revolving credit facility signed in March 2011 and consists of two tranches: EUR 1,000 million 5-year tranche and EUR 300 million 3 year tranche. Both tranches include two one-year extension options. The Facility will be used for general corporate purposes. During the period under review, TVO has also signed bilateral bank loans totaling EUR 575 million, of which EUR 275 million are undrawn.

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

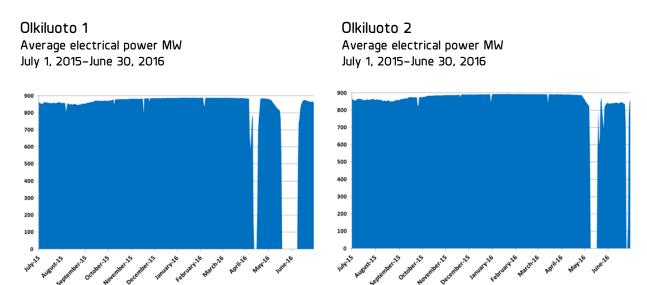
TVO uses its right to borrow funds back from the Finnish State Nuclear Waste Management Fund within the framework of legal regulations. On June 30, 2016 the amount of the loan was EUR 1,027.1 (December 31, 2015: 1,009.1) million and it has been relent to the Company's A-series shareholders. On March 31, 2016 loan from the Finnish State Nuclear Waste Management Fund was increased by EUR 18.0 (26.3) 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 6,764 (6,560) GWh. The total load factor was 88.2 (86.0) per cent.

The plant units operated safely during the period under review. OL1's net production was 3,221 (3,557) GWh and the load factor 84.0 (93.3) %. OL2's net production was 3,543 (3,003) GWh and the load factor 92.4 (78.7) %.



OL1 was out of production in April for less than a week. Electricity production at the plant unit was interrupted on April 11 for the replacement of damaged fuel elements. Back to electricity generation the plant unit was connected on April 16.

#### **Annual Outages**

The annual outages of 2016 at the Olkiluoto nuclear power plant were carried out from May 8 to June 9, 2016. OL1 had a more extensive maintenance outage taking more than 21 days, and OL2 underwent a refueling outage that lasted over 9 days. The annual outage period was about five days longer than expected. The schedule was affected e.g. by delays in work carried out on control rod actuators. In all other respects the annual outages were implemented according to plans.

At OL1, the main works carried out during the maintenance outage included replacement of one main circulation pump and the associated frequency converter, renewal of the neutron flux calibration system, replacement of low-voltage switchgears as well as modernisation in one sub-system of the heating system that contributes to residual heat removal. A containment leak-tightness test was also carried out. In addition to TVO's own personnel, up to about one thousand employees of external contractors were involved in the outage works.

In addition to refueling, the OL2 outage included also annually recurring maintenance work.

#### Olkiluoto 3

Olkiluoto 3 (OL3), 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. According to the schedule updated by the Supplier in September 2014, regular electricity production in the unit will commence at the end of 2018.

Most of the construction works for the plant unit have been completed. The installation of the electrical systems, the instrumentation and control system (I&C), and mechanical systems is still in progress. Test runs with the I&C commenced in January 2016. In April, testing of the process systems was started, and the operating license application was submitted to the Ministry of Employment and the Economy (MEE). The decision to grant a license will be made by the Finnish Government on the basis of MEE's proposal.

The first phase of the commissioning of the turbine plant is completed. Some of the systems and components will be kept in operation; the rest will be preserved in accordance with a separate plan.

The workforce at the site at the end of the period under review was about 2,600 persons. Occupational safety at the site remained at a good level.

The pending disputes concerning the plant unit are described in the paragraph 'Pending Court Cases and Disputes'.

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 26.5 (25.6) million and the amount consumed to EUR 25.9 (25.6) million.

The nuclear fuel and uranium stock carrying value on June 30, 2016 was EUR 224.7 (December 31, 2015: 224.2).

#### 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 last excavation stage of the underground bedrock research facility ONKALO started in March has continued according to plan. In May, the municipality of Eurajoki granted a building permit for the disposal facility for spent nuclear fuel. Preparations for the excavations of the base of the encapsulation plant started with topsoil removal in June.

Posiva Solutions Oy, a wholly-owned subsidiary of Posiva Oy, was founded on June 10, 2016. The company focuses on the sales of the know-how Posiva has accumulated from its design, research and development activities in the final disposal of spent nuclear fuel, as well as on associated consulting services. In June, Posiva Solutions made a service agreement on providing Fennovoima Oy with expert services related to the final disposal of spent nuclear fuel.

The nuclear waste management plan for 2016–2018 was submitted to the Ministry of Employment and the Economy (MEE) at the end of June. 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.

The liabilities in the consolidated financial statement show a provision related to nuclear waste management liability of EUR 947.9 (December 31, 2015: 971.2) 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 2015, MEE set TVO's liability for nuclear waste management at EUR 1,369.4 (1,349.1) million at the end of 2015 and the Company's funding target for 2016 at EUR 1,369.4 (1,345.4) million.

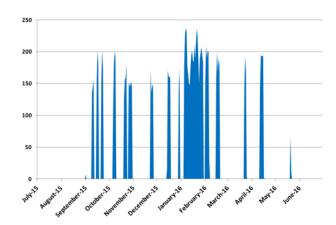
In March 2016, the Finnish State Nuclear Management Fund confirmed TVO's nuclear waste management fee for 2015 at EUR 11.4 (20.8) million, which was paid into the Fund on March 31, 2016 (March 31, 2015). The nuclear waste management fee for 2016 will be confirmed in March 2017.

#### 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, 2016 was 197.7 (43.6) GWh requiring 70.4 (15.7) thousand tons of coal and 168,0 (36.2) thousand tons of carbon dioxide emission rights.

#### TVO's share of Meri-Pori's production Average electrical power MW July 1, 2015–June 30, 2016



## Acquisitions of Tangible and Intangible Assets and Shares

Investments during the period under review were EUR 131.9 (126.0) million. Investments of the parent company were EUR 130.9 (124.2) million, of which EUR 103.7 (98.6) million was allocated to the OL3 project.

At present, several plant modifications are planned and implemented in Olkiluoto to prepare the OL1 and OL2 plant units for the renewal of the operating license in 2018.

Carbon dioxide emission rights have been relinquished to the Energy Market authority worth EUR 1.2 (1.9) million. During the period under review, emission rights were acquired worth EUR 0.9 (0.3) 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

In 2012, TVO submitted a claim and defense in the International Chamber of Commerce (ICC) arbitration proceedings concerning the delay and the ensuing costs incurred at the Olkiluoto 3 project. In July 2015, TVO updated its quantification estimate of its costs and losses to amount to approximately EUR 2.6 billion until December 2018, which, according to the schedule submitted by the OL3 Supplier in September 2014, is the estimated start of regular electricity production of OL3.

The proceedings were initiated in December 2008 by the OL3 Supplier. The Supplier's monetary claim, updated in February 2016, is approximately EUR 3.52 billion in total. The sum is based on the Supplier's updated analysis of events that occurred through September 2014, with certain claims quantified to December 31, 2014. The sum includes penalty interest (calculated to June 30, 2016) and payments allegedly delayed by TVO under the plant contract amounting to a combined total of approximately EUR 1.45 billion, as well as approximately EUR 135 million in alleged loss of profit. TVO has considered and found the earlier claims by the Supplier to be without merit, and will scrutinize the updated claim.

The Supplier consortium companies (AREVA GmbH, AREVA NP SAS and Siemens AG) are jointly and severally liable for the plant contract obligations.

TVO has not recorded any receivables or provisions on the basis of claims presented in the arbitration proceedings.

#### Personnel

The total number of personnel in the Group at the end of the period under review was 809 (December 31, 2015: 749, June 30, 2015: 813). The number of permanent employees in the Group at the end of the period under review was 724 (December 31, 2015: 731, June 30, 2015: 732).

Based on the personnel survey 2015, TVO has initiated a new program *Hyvinvointi ja tulokselliset tekijät 2020* ("Wellbeing and profitability factors"). The program will focus on the items identified in the personnel survey. The project has progressed according to plan. As part of the program, among other things, a Well-being at work 2016 program was launched.

In early 2016, TVO also launched a Group competence survey project. The aim of the project is to ensure successful commissioning of OL3 and safe operations of all the Olkiluoto plant units, including Posiva's final disposal facility.

### Annual General Meeting

TVO's Annual General Meeting was held on March 23, 2016. The AGM approved the financial statements for 2015, 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 held on the same day as the AGM, 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.

#### 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 2015 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. 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 going on. Testing of the process systems continue, and cleaning of the reactor primary circuit is scheduled to commence towards the end of the year. TVO continues to support the Supplier to complete the project.

The Meri-Pori coal-fired power plant capacity will be utilized in accordance with the former principles.

The earth-moving works and excavations for Posiva's encapsulation plant will continue.

#### Events after the Period under Review

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

July 15, 2016

Teollisuuden Voima Oyj Board of Directors

## **KEY FIGURES OF TVO GROUP**

TVO GROUP (IFRS) (M€)	1.1 30.6.2016	1.1 30.6.2015	1.1 31.12.2015
Turnover	177	156	276
Profit/loss for the period	-7	-1	5
Investments 1)	132	126	345
Equity Subordinated shareholder loans (hybrid equity) (included in the former) 3)	1 579 479	1 536 379	1 612 479
Non-current and current interest-bearing liabilities (excluding loan from VYR) <sup>2)</sup>	3 747	3 661	3 654
Loan from VYR 2)	1 027	1 009	1 009
Provision related to nuclear waste management	948	946	971
Balance sheet total	7 455	7 295	7 464
Equity ratio % <sup>4)</sup>	28,8	28,8	29,4
Average number of personnel	780	825	794

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

4) Equity ratio % =100 x balance sheet total - provision related to nuclear waste management - loan from the Finnish State Nuclear Waste Management Fund

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

<sup>3)</sup> Subordinated loans

## KEY FIGURES OF TEOLLISUUDEN VOIMA OYJ

TEOLLISUUDEN VOIMA OYJ (FAS) (M€)

Parent company's interim financial statement has been made in

Total		6 947	6 587	14 405
Coal-fired power		198	44	167
Nuclear power		6 749	6 543	14 238
ELECTRICITY DELIVERED TO EQUIT HOLDERS OF THE COMPANY (GWh)	$\Gamma \mathbf{Y}$	1.1 30.6.2016	1.1 30.6.2015	1.1 31.12.2015
		Waste Management	Fund	
<sup>4)</sup> Equity ratio %	=100 x	equity + appropriation the company balance sheet total -	loan from the Finn	
<ul> <li>Acquisitions of tangible and intangible assets and</li> <li>The Finnish State Nuclear Waste Management Fu</li> <li>Subordinated loans</li> </ul>				
Average number of personnel		779	821	791
Equity ratio % <sup>4)</sup>		28,8	27,8	28,9
Balance sheet total		6 284	6 084	6 252
Loan from VYR 2)		1 027	1 009	1 009
Loans from equity holders of the company 3)		479	379	479
Non-current and current interest-bearing liabilities (excluding loan from VYR and shareholder loans) <sup>2)</sup>		3 588	3 523	3 509
Appropriations		177	171	180
Equity		858	858	858
Investments 1)		131	124	344
Capital expenditure (depreciation and financial inco	me and expen	ses) 26	84	111
Nuclear waste management costs		39	22	38
Fuel costs		31	27	59
Profit/loss before appropriations		-3	-1	7
Turnover		175	155	273

TVO GROUP

# CONSOLIDATED FINANCIAL STATEMENT IN BRIEF AND NOTES CONSOLIDATED INCOME STATEMENT

EUR 1 000	1.1 30.6.2016	1.1 30.6.2015	1.1 31.12.2015
Turnover	176 877	155 855	275 746
Work performed for own purposes	5 324	4 731	9 137
Other income	5 889	63 589	96 950
Materials and services	-86 162	-36 902	-71 647
Personnel expenses	-30 846	-32 474	-59 186
Depreciation and impairment charges	-26 902	-86 511	-114 615
Other expenses	-55 562	-50 943	-89 036
Operating profit/loss	-11 382	17 345	47 349
Finance income	7 722	11 747	22 284
Finance expenses	-5 087	-30 118	-65 008
Total finance income and expenses	2 635	-18 371	-42 724
Share of the profit/loss of joint ventures	2 117	0	0
Profit/loss before income tax	-6 630	-1 026	4 625
Income taxes	-1	-1	0
Profit/loss for the period	-6 631	-1 027	4 625
Profit/loss for the period attributable to:			
Equity holders of the company	-6 631	-1 027	4 625

#### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

EUR 1 000	1.1 30.6.2016	1.1 30.6.2015	1.1 31.12.2015
Profit/loss for the period	-6 631	-1 027	4 625
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	-385	2 354	-23 412
Cash flow hedges	-23 595	21 798	19 911
Total other comprehensive profit/loss items for the period	-23 980	24 152	-3 501
Total comprehensive profit/loss for the period	-30 611	23 125	1 124
Total comprehensive profit/loss for the period attributable to:			

-30 611

23 125

1 124

Equity holders of the company

TVO GROUP

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Assets			
Non-current assets			
Property, plant and equipment	4 950 628	4 665 178	4 852 768
Intangible assets	6 627	6 188	7 128
Loans and other receivables	1 030 465	1 012 617	1 012 464
Investments in joint ventures	3 128	1 009	1 009
Investments in shares	1 934	27 982	1 934
Derivative financial instruments	98 055	100 089	110 469
Share in the Finnish State Nuclear Waste Management Fund	947 904	945 696	971 241
Total non-current assets	7 038 741	6 758 759	6 957 013
Current assets			
Inventories	247 128	243 610	250 420
Trade and other receivables	45 056	56 618	31 496
Derivative financial instruments	8 886	9 145	4 441
Fund units	0	200 230	100 385
Cash and cash equivalents	115 460	26 717	120 236
Total current assets	416 530	536 320	506 978
Total assets	7 455 271	7 295 079	7 463 991
Equity and liabilities  Capital and reserves attributable to equity holders of the company			
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	-11 399	40 234	12 581
Subordinated shareholder loans (hybrid equity)	479 300	379 300	479 300
Retained earnings	262 610	267 952	271 542
Total equity	1 579 087	1 536 062	1 611 999
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	947 904	945 696	971 241
Loan from the Finnish State Nuclear Waste Management Fund	1 027 050	1 009 050	1 009 050
Bonds	2 482 296	2 478 062	2 480 900
Other financial liabilities	743 393	729 257	642 370
Derivative financial instruments	66 779	31 515	37 030
Total non-current liabilities	5 267 422	5 193 580	5 140 591
Current liabilities			
Current financial liabilities	448 484	420 814	493 307
Derivative financial instruments	6 370	1 429	755
Advance payments received	44 461	38 829	22 241
Trade payables	11 456	19 295	12 971
Other current liabilities	97 991	85 070	182 127
Total current liabilities	608 762	565 437	711 401
Total liabilities	5 876 184	5 759 017	5 851 992
Total equity and liabilities	7 455 271	7 295 079	7 463 991

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

EJR 1 000	Share capital	Share premium reserve and statutory reserve	Fair value and other reserves	Subordinated shareholder loans (hybrid equity)	Retained earnings	Attributable to equity holders of the company	Total equity
Equity 1.1.2016	606 193	242 383	12 581	479 300	271 542	1 611 999	1 611 999
Profit/loss for the period	0	0	0	0	-6 631	-6 631	-6 631
Other comprehensive items:							
Changes in fair values of the available-for-sale investments	0	0	-385	0	0	-385	-385
Cash flow hedges	0	0	-23 595	0	0	-23 595	-23 595
Subordinated shareholder loans (hybrid equity)	0	0	0	0	0	0	0
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-2 301	-2 301	-2 301
Equity 30.6.2016	606 193	242 383	-11 399	479 300	262 610	1 579 087	1 579 087

		Share					
		premium		Subordinated		Attributable	
		reserve and	Fair value	shareholder		to equity	
	Share	statutory	and other	loans (hybrid	Retained	holders of the	
EUR 1 000	capital	reserve	reserves	equity)	earnings	company	Total equity
Equity 1.1.2015	606 193	242 383	16 082	439 300	271 160	1 575 118	1 575 118
Profit/loss for the period	0	0	0	0	-1 027	-1 027	-1 027
Other comprehensive items:							
Changes in fair values of the available-for-sale investments	0	0	2 354	0	0	2 354	2 354
Cash flow hedges	0	0	21 798	0	0	21 798	21 798
Subordinated shareholder loans (hybrid equity)	0	0	0	-60 000	0	-60 000	-60 000
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-2 181	-2 181	-2 181
Equity 30.6.2015	606 193	242 383	40 234	379 300	267 952	1 536 062	1 536 062

TVO GROUP

## CONSOLIDATED STATEMENT OF CASH FLOWS

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Operating activities			
Profit/loss for the period	-6 631	-1 027	4 625
Adjustments:			
Income tax expenses	1	1	1
Finance income and expenses	-2 635	18 371	42 724
Depreciation and impairment charges	26 902	86 511	114 615
Share of the profit/loss of joint ventures	-2 117	0	0
Other non-cash flow income and expenses	7 099	-20 476	-43 493
Sales profit/loss of property, plant and equipment and shares	0	-1	-27 978
Change in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables	-19 517	-28 038	525
Increase (-) or decrease (+) in inventories	4 136	-2 789	-10 889
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	41 956	26 818	-2 705
Interest paid and other finance expenses	-2 433	-4 488	-6 775
Dividends received	0	1 219	1 219
Interest received	8 163	9 926	10 001
Taxes paid	-2	-1	-1
Cash flow from operating activities	54 922	86 026	81 869
Investing activities			
Acquisition of property, plant and equipment	-236 664	-144 179	-256 586
Proceeds from sale of property, plant and equipment	0	0	6
Acquisition of intangible assets	-364	-520	-1 095
Acquisition of shares	-2	-6	-135
Proceeds from sale of shares	0	95	28 248
Loan receivables granted	-18 000	-26 250	-26 234
Repayments of loans granted	0	0	274
Cash flow from investing activities	-255 030	-170 860	-255 522
Financing activities			
Withdrawals of subordinated shareholder loans (hybrid equity)	0	0	100 000
Repayment of subordinated shareholder loans (hybrid equity)	0	-60 000	-60 000
Withdrawals of long-term loans	318 000	526 250	526 250
Repayment of long-term loans	-288 793	-93 734	-164 309
Investments in fund units	100 000	-200 000	-100 000
Interest paid of subordinated shareholder loans (hybrid equity)	-1 846	-2 265	-4 311
Increase (-) or decrease (+) in interest-bearing receivables	0	0	12
Increase (+) or decrease (-) in current financial liabilities	67 971	-172 118	-117 171
Cash flow from financing activities	195 332	-1 867	180 471
Change in cash and cash equivalents	-4 776	-86 701	6 818
Cash and cash equivalents at the beginning of period	120 236	113 418	113 418
Cash and cash equivalents at the end of period	115 460	26 717	120 236

#### 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 2015. 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 2015.

#### JOINT VENTURES

Posiva Solutions Oy, a wholly-owned subsidiary of Posiva Oy, was founded on June 10, 2016. Posiva Oy is a joint venture of Teollisuuden Voima Oyj. The Group applies IFRS 11 standard to all joint arrangements. Posiva Solutions Oy is a joint venture of TVO, which has a 73.62 per cent interest in it. Posiva Solutions Oy focuses on the sales of the know-how Posiva has accumulated from its design, research and development activities in the final disposal of spent nuclear fuel, as well as on associated consulting services. Interests in joint ventures are accounted by the equity method of accounting.

#### COMPARABILITY OF THE INCOME STATEMENT

The total cost estimate based on a new nuclear waste management technical plan and schedule was updated in June 2016. Updated cost estimate decreased the provision related to the nuclear waste management and finance expenses and increased the amount of materials and services. The overall effect on profit for the period is negative because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services. Moreover, 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 negative profit impact of the updates and changes is mainly non-recurring. See note Assets and provisions related to nuclear waste management obligation.

## COMPARABILITY OF THE INCOME STATEMENT - IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT Q2 2015

The value of property, plant and equipment relating to the OL4 project, amounting to EUR 58.2 million, was recognized as an asset write-down in TVO's balance sheet and recorded as impairment charge to the profit and loss statement. The impairment charge invoiced from the shareholders is presented under other income.

#### 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

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Nuclear power	164 633	148 099	256 843
Coal-fired power	12 244	7 756	18 903
Total	176 877	155 855	275 746

#### PROFIT/LOSS FOR THE PERIOD BY SEGMENTS

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Nuclear power	-1 973	571	10 823
Coal-fired power	-911	-1 644	-3 506
Profit/loss before appropriations (FAS)	-2 884	-1 073	7 317
The impact of the nuclear waste management obligation	-6 225	-279	-3 258
The impact of financial instruments	2	25	27
Other IFRS adjustments	359	300	539
Share of the profit/loss of joint ventures	2 117	0	0
Total (IFRS)	-6 631	-1 027	4 625

#### ASSETS BY SEGMENTS

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Nuclear power	6 259 553	6 044 490	6 218 056
Coal-fired power	24 851	40 373	34 562
Total (FAS)	6 284 404	6 084 863	6 252 618
The impact of the nuclear waste management obligation	1 054 567	1 061 563	1 084 129
The impact of financial instruments	71 961	74 742	81 771
The impact of finance leases	57 387	59 160	58 310
Other IFRS adjustments	-15 165	14 751	-12 837
Share of the profit/loss of joint ventures	2 117	0	0
Total (IFRS)	7 455 271	7 295 079	7 463 991

## CHANGES IN PROPERTY, PLANT AND EQUIPMENT

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Opening net book amount	4 852 768	4 628 318	4 628 318
Increase	126 614	125 240	342 846
Decrease	-2 448	-2 928	-8 715
Depreciation and impairment charges	-26 306	-85 941	-113 501
Accumulated depreciation from deduction	0	489	3 820
Closing net book amount	4 950 628	4 665 178	4 852 768

## **CHANGES IN INTANGIBLE ASSETS**

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Opening net book amount	7 128	7 893	7 893
Increase	1 283	797	2 282
Decrease	-1 187	-1 932	-1 932
Depreciation and impairment charges	-597	-570	-1 115
Closing net book amount	6 627	6 188	7 128

#### 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 2015.

#### **DERIVATIVE FINANCIAL INSTRUMENTS**

Nominal values of the derivative financial instruments \*

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
Interest rate swaps	2 379 518	1 151 446	1 809 518
Forward foreign exchange contracts and swaps	145 988	176 357	159 508
Cross-currency swaps	856 898	856 898	856 963
Total	3 382 404	2 184 701	2 825 989

Fair values of the derivative financial instruments *			30.6.2016			30.6.2015		:	31.12.2015
EUR 1 000	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Interest rate swaps									
Cash flow hedges	0	-37 888	-37 888	0	-16 920	-16 920	0	-17 731	-17 731
Fair value hedges	41 063	-5 051	36 012	20 854	0	20 853	25 876	0	25 876
Non-hedges	0	0	0	0	-507	-507	0	-176	-176
Forward foreign exchange contracts and swaps									
Cash flow hedges	25 647	-188	25 459	30 035	-350	29 685	30 304	-475	29 829
Cross-currency swaps									
Non-hedges	40 231	-30 022	10 209	58 346	-15 166	43 179	58 731	-19 404	39 327
Total	106 941	-73 149	33 792	109 235	-32 943	76 290	114 910	-37 785	77 125

<sup>\*</sup> Cross-currency swaps related to Private Placements included.

## DISCLOSURE OF FAIR VALUE MEASUREMENTS BY THE LEVEL OF FAIR VALUE MEASUREMENT HIERARCHY

			30.6.2016			31.12.2015
EUR 1 000	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial assets at fair value						
Derivative financial instruments at fair value through profit or loss		40 231			58 731	
Derivative financial instruments designated as cash flow hedges		25 647			30 304	
Derivative financial instruments designated as fair value hedges		41 063			25 876	
Available-for-sale investments						
Investments in listed companies	0			0		
Investments in other stocks and shares			0			0
Total	0	106 941	0	0	114 910	0
Financial liabilities at fair value						
Derivative financial instruments at fair value through profit or loss		30 022			19 580	
Derivative financial instruments designated as cash flow hedges		38 076			18 205	
Derivative financial instruments designated as fair value hedges		5 051			0	
Total	0	73 149	0	0	37 785	0

On 30 June 2016, TVO has also unquoted shares worth EUR 1,934 (1,934) thousand that are measured at acquisition cost because their fair value cannot be reliably determined.

#### 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

			30.6.2016			31.12.2015
	Financial			Financial		
	liabilities			liabilities		
	measured at			measured at		
EUR 1 000	amortized cost	Book Value	Fair value	amortized cost	Book Value	Fair value
Non-current liabilities						
Other financial liabilities*	3 225 690	3 225 690	3 306 215	3 123 270	3 123 270	3 173 706

<sup>\*</sup>Bonds and EUR-fixed loans included

For other financial assets and liabilities than the ones presented in the table, the book value corresponds to their fair value.

## ASSETS AND PROVISION RELATED TO NUCLEAR WASTE MANAGEMENT OBLIGATION

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

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	947 904	945 696	971 241
Provision related to nuclear waste management (non-current liabilities)	947 904	945 696	971 241

## 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	30.6.2016	30.6.2015	31.12.2015
Liability for nuclear waste management according to the Nuclear Energy Act	1 369 400	1 349 100	1 369 400
Funding target obligation	1 369 400	1 345 400	1 369 400
TVO's share in the Finnish State Nuclear Waste Management Fund	1 369 400	1 345 400	1 357 800
Difference between the liability and TVO's share of the fund	0	3 700	11 600

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 was updated in June 2016. The updated cost estimate decreased the provision related to the nuclear waste management and finance expenses and increased the amount of materials and services. The provision on balance sheet compared to the value at the end of the previous year was decreased by EUR 23.3 million. The effect of revised cost estimate to the consolidated income statement compared to the previous estimate were EUR 28.1 million increase in materials and services and EUR 24.0 million decrease in finance expenses.

The overall effect on profit for the period is negative because the amount of the share in the Finnish State Nuclear Waste Management Fund and the provision related to nuclear waste management are equal and the difference is entered as an adjustment to materials and services.

Moreover, 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.

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 Employment and the Economy (MEE) 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, 2016 is EUR 1,369.4 million. The carrying amount in the balance sheet is EUR 947.9 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.

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	30.6.2016	30.6.2015	31.12.2015
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	1 027 050	1 009 050	1 009 050
Guarantees given by shareholders related to the nuclear waste management obligation	144 530	137 620	137 620

#### **Investment commitments**

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

EUR 1 000	30.6.2016	30.6.2015	31.12.2015
OL1 and OL2	146 000	135 000	140 000
OL3	705 000	786 000	692 000
Total	851 000	921 000	832 000

#### **Pending Court Cases and Disputes**

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