



Report of the Board of Directors and Financial Statements 2015



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## Year 2015 in brief

The energy sector is in the midst of a rapidly started transition which may take several years. Due to overcapacity in the electricity market and the subsidy mechanisms of renewable energy generation forms, the market price of electricity has significantly fallen. At the same time, the costs related to nuclear power generation have risen. This development has led to a deterioration of the profitability of all base load power production, including nuclear power.

The electricity production at Teollisuuden Voima's (TVO) Olkiluoto nuclear power plant in 2015 was 14.26 TWh (billion kilowatt-hours), which accounted for about 17 percent of all electricity consumed in Finland.

The consolidated turnover for 2015 was EUR 275.7 (327.2) million. The amount of electricity delivered to the shareholders was 14,405 (15,140) GWh. The drop in the amount of electricity delivered to shareholders was mainly caused by a near three-week shutdown of OL2 due to water leakage in the generator in February, as well as the decreased supply of electricity from the Meri-Pori coal-fired power plant. 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 in the price of electricity and thus in principle the profit/loss for the financial year is zero. Due to the Company's operating principle, key indicators based on financial performance will not be presented.

TVO is preparing for the renewal of the operating license for Olkiluoto 1 and Olkiluoto 2 power plant units in 2018 by making plant modifications to further improve safety in possible but unlikely accident situations, where several safety systems were lost simultaneously.

In the Olkiluoto 3 Project, a significant milestone was achieved when the factory acceptance tests of both the process and safety control and instrumentation (I&C) systems were completed. Most of the construction works for the plant unit have been completed. Next, the project will focus on finalizing the installations, as well as testing and commissioning of the systems.

In June, TVO's Extraordinary General Meeting decided not to apply for a construction license for the Olkiluoto 4 nuclear power plant unit during the validity of the decision-in-principle made in 2010. The decision-in-principle expired at the end of June 2015.

In November 2015, the Finnish Government granted a construction license for Posiva's final disposal repository and encapsulation plant to be constructed in Olkiluoto.

TVO introduced a new operating model and took measures to improve cost efficiency with the aim of generating annual cost savings of EUR 15 million. As a result TVO's personnel work reduced by about 100 man-years. In connection with a business transfer, Posiva's support functions and part of safety functions (a total of 30 persons) transferred from Posiva to TVO in the beginning of January 2015. At the end of the year, the total number of personnel in TVO Group was 749 (809) and in Posiva 77 (117).

# Operating environment

The energy sector is in the midst of a rapidly started transition which may take several years. The economic stagnation has led to a drop in demand. On the other hand, the electricity supply has increased since different subsidy mechanisms promote investments in renewable energy, especially in wind power. As a result the market price of electricity has significantly fallen. At the same time, the costs related to nuclear power have risen.



The development has led to a deterioration of the profitability of all base load power production, including nuclear power. In a short time, about 2,500 MW of electric power is phasing out in Finland. In Sweden, power companies have announced plans to close nuclear power plants before the end of their technical lifetime. This may lead to power shortage, especially during peak consumption.

The total consumption of electricity in Finland in 2015 was 82.5 terawatt hours (TWh). The consumption decreased by 1.1 percent compared to the previous year. The share of net electricity imports was 19.8 percent (16.3 TWh) of the total consumption. The amount of nuclear power generated in 2015 was 22.3 TWh, which accounted for 27.1 percent of the electricity procured.

In March, Parliament passed a bill to amend the Finnish Nuclear Energy Act and the Radiation Act. The Radiation and Nuclear Safety Authority Finland (STUK) received a wider mandate to issue binding regulations on the safe use of radiation. The nuclear safety research fee collected from nuclear plant holders and the fees charged to licensees under their waste management obligation will be increased for a fixed term. For TVO, the fees charged will increase by approximately EUR 2 million per year, over the period 2016–2020.

The Program of Prime Minister Juha Sipilä's Government was finalized at the end of May. The Government's objective includes replacing imported fossil fuel-based energy and achieving the 2020 climate objectives during the government term.

In the early part of the year, the European Commission released a communication on the proposed EU Energy Union. According to the communication, diversification of the supply of nuclear fuel is important to ensure supply security. In July, the Commission released another communication on the electricity market and launched the related stakeholder consultation. Legislative initiatives are expected from the Commission in 2016. One of the most important items to be decided will be the reform of the European electricity market model. Its main objective is to integrate renewable energy sources into the market and increase investments in intermittent production that supports flexible power generation.

In July, the European Commission published a proposal for new legislation to reform the EU emissions trading scheme. Over the long term, the Commission aims to improve the system so that in future, the emissions trading scheme could be used as the primary control system to reach the climate objectives.

In October, Parliament enacted the legislative proposal to increase the maximum limit of power plant property tax. The maximum property tax rate will increase from 2.85 per cent to 3.10 per cent starting from 2016.

In November, the European Commission initiated a consultation concerning the renewal of the nuclear power investment notification procedure, which is based on Articles 41–44 of the Euratom agreement. According to the Commission, the present procedures are scattered and unclear from the perspective of the notifying party.

At the Paris climate conference in December 2015, over 190 countries adopted the universal, legally binding global climate agreement. Governments agreed a long-term goal of keeping the increase in global average temperature to below 2 degrees Celsius and to aim to limit the increase to 1.5 degrees Celsius. Country-specific emission reduction targets are not considered binding. Each country can decide for itself the most appropriate means of reducing emissions.

## Main events

TVO's nuclear power plant in Olkiluoto had a good production year in 2015. Olkiluoto 1 achieved the second highest production volume 7.40 TWh (billion kilowatt-hours) in the history of the plant unit. The combined production of both plant units was 14.26 TWh. The production of Olkiluoto 2 was decreased by a generator failure in February. The combined load factor of the plant units was 92.7 per cent. Together with the share of the Meri-Pori coal-fired power plant TVO's production



was 14.43 TWh. The electricity produced in Olkiluoto accounted for about 17 per cent of all electricity consumed in Finland.

- The annual outages of 2015 at the Olkiluoto nuclear power plant were carried out from May 3 to June 5, 2015. OL1 underwent a refueling outage and OL2 had a maintenance outage.
- The new YVL Guides (regulatory guides on nuclear safety) published by the Radiation and Nuclear Safety Authority Finland (STUK) at the end of 2013 were implemented for the most part at the Olkiluoto power plant during 2015. The operating plant units at Olkiluoto meet the technical requirements of the new YVL Guides well.
- Most of the construction works for the Olkiluoto 3 plant unit have been completed. The factory acceptance tests of the process control and instrumentation (I&C) systems were completed, and the systems were delivered to Olkiluoto in August. The factory acceptance tests of the safety I&C systems were completed in December. Next, the project will focus on finalizing the installations, as well as testing and commissioning of the systems. According to the schedule updated by the Supplier, regular electricity production at OL3 will commence at the end of 2018.
- In July, TVO and the Supplier, Areva-Siemens Consortium, updated their claims in the International Chamber of Commerce (ICC) arbitration proceedings concerning the delay in the OL3 Project. The quantification estimate updated by TVO of its costs and losses is approximately EUR 2.6 billion until December 2018. The Supplier's monetary claim was approximately EUR 3.4 billion in total. The claim covered events that occurred during the construction period until the end of June 2011. TVO has found the earlier claims by the Supplier to be without merit.
  - In February 2016, the Supplier updated its claim in the arbitration proceedings concerning the delay in the OL3 Project. The Supplier's monetary claim is now approximately EUR 3.52 billion in total. Changes in the arbitration proceedings after the year end are described in the paragraph 'Major Events after the End of the Year'.
- In November 2015, the Finnish Government granted a construction license for Posiva's final disposal repository and encapsulation plant to be constructed in Olkiluoto.
- In June, TVO's Extraordinary General Meeting decided not to apply for a construction license for the Olkiluoto 4 nuclear power plant unit during the validity of the decision-in-principle made in 2010. The decision-in-principle expired at the end of June 2015.
- TVO's co-operation negotiations initiated at the beginning of January 2015 concluded at the end of February. The negotiations focused on reorganizing functions and improving cost efficiency. The aim is to generate annual savings of EUR 15 million. Through the negotiations, the number of personnel was cut by 42 employees. Other personnel reductions achieved through various voluntary arrangements, making the total amount approximately 100 man-years.

# 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 in the price of electricity and thus in principle the profit/loss for the financial year 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. Due to the Company's operating principle, key indicators based on financial performance will not be presented.

The consolidated turnover for 2015 was EUR 275.7 (327.2) million. The amount of electricity delivered to the shareholders was 14,405 (15,140) GWh. The drop in the amount of electricity delivered to shareholders was mainly caused by a near three-week shutdown of OL2 due to water leakage in the generator in February, as well as the decreased supply of electricity from the Meri-Pori coal-fired power plant.

The consolidated profit/loss was EUR 4.6 (-0.7) million.



# Financing and liquidity

TVO's financial situation has developed as planned.

TVO's liabilities (non-current and current) at the end of the year, excluding the loan from the Finnish State Nuclear Waste Management Fund relent to shareholders, totaled EUR 3,987.5 (December 31, 2014: 3,727.3) million, of which EUR 479.3 (439.3) million were subordinated shareholder loans. During 2015, TVO raised a total of EUR 600.0 (801.8) million in non-current liabilities, of which EUR 100.0 (100.0) million were subordinated shareholder loans. Repayments during the period under review amounted to EUR 222.6 (580.0) million, of which EUR 60.0 (0.0) million were subordinated shareholder loans.

In January, Japan Credit Rating Agency (JCR) lowered its AA rating for TVO to AA- and estimated the outlook to be stable. In May, Fitch Ratings reinstated its rating to BBB/F3 with a stable outlook. Standard & Poor's lowered its rating for TVO in May from BBB/A-2 to BBB-/A-3 with a continued negative outlook.

In February, TVO issued a EUR 500 million 10-year bond with an annual coupon of 2.125 per cent under its Euro Medium Term Note (EMTN) Program. In June, the value of the EMTN Program was increased from EUR 3.5 billion to EUR 4 billion.

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 December 31, 2015, the amount of the loan was EUR 1.009,1 (December 31, 2014: 982.8) million and it has been relent to the Company's A-series shareholders. The loan from the Finnish State Nuclear Waste Management Fund was increased by EUR 26.3 (51.1) million on March 31, 2015.

## Share capital

TVO's share capital on December 31, 2015 was EUR 606.2 (606.2) million.

The Company has 1,394,283,730 (1,394,283,730) shares, of which 680,000,000 belong to the A series, 680,000,000 to the B series and 34,283,730 to the C series. The A series shares entitle to electricity generated at the OL1 and OL2 units and the B series shares to the electricity generated at the OL3 unit. The C series owners have right to acquire electricity generated by TVO's share of the Meri-Pori coal-fired power plant.

# Administrative principles

Because TVO is a non-listed public company applying the cost-price principle, it observes the Corporate Governance Code for listed companies where applicable. TVO is not obligated to observe the Corporate Governance Code nor therefore its Comply or Explain principle. According to the Securities Market Act (14.12.2012/746), the issuer of a security subject to public trading must provide a Corporate Governance Statement in its Annual Report or separately. TVO has given a separate Corporate Governance Statement which is published on its website, www.tvo.fi at the same time with this Report of the Board of Directors.



## Administrative bodies

TVO's administrative bodies and their operations in 2015 have been described in a separate Corporate Governance Statement to be found on the Company's website.

# Regulatory environment

The purpose of the nuclear energy legislation is to ensure that the use of nuclear energy is conducted in a manner that benefits the overall good of society. The main rules of the use of nuclear energy, monitoring the use, and nuclear safety, are included in the Finnish Nuclear Energy Act and Nuclear Energy Decree as well as lower level statutes issued pursuant to them, such as the Radiation and Nuclear Safety Authority's YVL (NPP) guidelines. Other regulations pertaining to the exploitation of nuclear energy will be found in the Radiation Act.

New Regulatory Guides on nuclear safety (YVL Guides) published by the Radiation and Nuclear Safety Authority Finland (STUK) in November 2013 have been adopted at the Olkiluoto power plant. Most of the requirements specified for nuclear power plants and the licensees of the plants enforced as of September 1, 2015.

The new Guides lay down increased requirements and specify them in more detail. They cover the design and operation of nuclear power plants, the safety of the plant and the environment, nuclear materials and nuclear waste as well as structures and equipment at nuclear facilities. STUK issued separate decisions regarding the application of the requirements at existing plant units, such as OL1 and OL2. As far as new nuclear power plants are concerned, the new Guides will be enforced as such. An assessment of compliance with the new requirements at the OL3 plant unit will be submitted to STUK at the latest in the same context as the operating license application for OL3 is submitted to the Ministry of Employment and the Economy.

TVO carried out the compliance assessment as part of a more extensive project that focused on the assessment of the safety level.

In addition, the Nuclear Liability Act concerns the liability the operator of a nuclear plant has in the event of a nuclear accident. A temporary amendment to the Nuclear Liability Act came into force as of the beginning of 2012. According to the temporary amendment, the plant operator's liability for a nuclear incident in Finland is unlimited but limited to a maximum amount of 600 million Special Drawing Rights (SDR), corresponding to EUR 700 million, for nuclear damage outside of Finland. The operator has to have insurance up to a minimum of 600 million SDR.

The use of nuclear energy is subject to license. Applications are made to the Government for a decision-in-principle, construction license and operating license. The Radiation and Nuclear Safety Authority Finland (STUK) is responsible for monitoring the safety of nuclear energy use. STUK is also responsible for monitoring safety and emergency arrangements and nuclear material.

# Risk management, major risks and uncertainties

## Risk management

Risk management is a systematic approach which aims to support the fulfillment of TVO's strategy and business objectives as well as to ensure the existence of TVO's operational preconditions. Risk management is executed based on the company's policies and corporate governance.



Risk management is supervised by the Board of Directors of the Company, which endorses the principles on which it is based. The CEO, with the help of the Company's Management Board, is in charge of the risk management according to TVO's objectives and strategy. Under the Management Group there is a risk management group that is in charge of ensuring adequate risk treatment in the company.

The organization units are responsible for risk identification, analyzing and risk treatment. Risk identification is carried out as part of TVO's strategic and operational planning and follow-up as well as part of project management.

TVO has launched a company-wide risk management process which the Company's organization units comply with. By operating in accordance with the risk management process TVO ensures that risks facing the Company are systematically identified and each risk is treated according to its significance. The objective of the risk treatment process is either to prevent the risk from materializing or to reduce its likelihood or consequence.

TVO reduces risks connected with safety and production by keeping the plant units in good condition. Safe and reliable production is ensured by efficient life-cycle management of the plant units and high-quality planning and implementation of the annual outages.

Indemnity and property risks are covered with insurances. The aim of insurance management is to keep the scope, cover and cost of insurance in an acceptable level. TVO is a member of European nuclear insurance associations. Statutory liability insurance is in force for nuclear liability.

Fuel for the production of electricity, uranium and coal, is bought on the global market. Risks connected with nuclear fuel have been reduced by making purchases from a variety of suppliers and by concluding long-term contracts.

At OL3, risk management during the construction stage is primarily a question of overseeing and guiding the work of the Supplier according to the terms of the turnkey contract. Property damage risks and possible delays caused by them are covered by insurances.

TVO's financing and financial risk management is dealt with centrally by the Company's Treasury and Risk Management function in accordance with the financing policy adopted by the Board of Directors. The financing risks of TVO's business include liquidity and market and credit risks. By diversifying sources of finance, and with long-term credit commitments and liquid funds, financing risks can be reduced. The financial position has been strengthened by issuing long term private placements and bonds. TVO has reduced market risks by making use of interest rate and currency derivatives. According to the Company's financing policy, the loans denominated in foreign currencies will be hedged to the euro until the maturity date by using derivatives. Financial risk management and fuel price risks are dealt with in the notes to the consolidated financial statements, note 27 (Financial Risk Management).

## Major risks and uncertainties

TVO's major risks are related to the schedule of the OL3 project. Originally the electricity production was scheduled to start at the end of April 2009. The completion of the project, however, has been delayed.

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

The delay causes additional costs and losses, for which the Company has claimed compensation from the turnkey supplier of the OL3 plant.



There are no major risks or uncertainties concerning electricity production at OL1 and OL2 plant units or the Meri-Pori coal-fired power plant.

# Pending court cases and disputes

In 2012, TVO submitted a claim and defense in the International Chamber of Commerce (ICC) ar¬bitration 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 July 2015, was approximately EUR 3.4 billion in total. The claim covered events that occurred during the construction period until the end of June 2011. The sum included penalty interest (calculated until July 2015) and payments delayed by TVO under the plant contract amounting to a total of approximately EUR 1.4 billion, as well as approximately EUR 140 million in alleged loss of profit. Having considered and found the earlier claims by the Supplier to be without merit, TVO will scrutinize the updated claim and respond to it in due course.

In February 2016, the Supplier updated its claim in the arbitration proceedings concerning the delay in the OL3 Project. The Supplier's monetary claim is now approximately EUR 3.52 billion in total. Changes in the arbitration proceedings after the year end are described in the paragraph 'Major Events after the End of the Year'.

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

The arbitration proceedings may continue for several years.

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

# Nuclear power

TVO owns and operates two nuclear power plant units, Olkiluoto 1 (OL1) and Olkiluoto 2 (OL2), and is building a new plant unit, Olkiluoto 3 (OL3) at Olkiluoto in Eurajoki, Finland.

## Olkiluoto 1 and Olkiluoto 2

The electricity production of the Olkiluoto power plant units, OL1 and OL2, during 2015 was 14,261 (14,763) GWh. The total load factor was 92.7 (96.0) %.

The plant units operated safely. OL1's net production was 7,397 (7,266) GWh and load factor 96.2 (94.5) %. OL2's net production was 6,864 (7,497) GWh and load factor 89.2 (97.4) %.



OL2 was out of production nearly three weeks in February. On February 4, a water leak was detected in the water-cooled generator of the plant unit, and the generation of electricity was interrupted. After examination by TVO experts and the generator supplier, TVO decided to replace the rotor of the generator. Generation of electricity recommenced on February 24.

TVO is preparing for the upcoming operating license renewal of OL1 and OL2 in 2018 by making plant modifications, which will further improve the plant units' safety in possible but unlikely accidents in which several safety systems would be lost at the same time.

# Annual outages

The annual outages of 2015 at the Olkiluoto nuclear power plant were carried out from May 3 to June 5, 2015. OL1 underwent a refueling outage that lasted more than 10 days, and OL2 had a maintenance outage taking more than 17 days.

In addition to refueling, maintenance, repair work and tests were carried out in OL1, and a mixing unit in the feedwater system was replaced.

Apart from refueling, the major activities carried out in OL2 included equipment work in two subsystems, one of them comprising the replacement of low-voltage equipment. Both feedwater mixing units were also replaced.

Apart from TVO's own personnel, up to 800 subcontractor employees were involved in the annual outage 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. Originally, commercial electricity production was scheduled to start at the end of April 2009.

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. Factory acceptance testing of the process I&C system was completed, and the system was transferred to Olkiluoto in August. The factory acceptance testing of the safety I&C systems was completed in December.

The first phase of the commissioning of the turbine plant has been 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 year was about 2,300 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' and 'Major Events after the End of the Year'.



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.

## Olkiluoto 4

On July 1, 2010, Parliament approved the favorable decision-in-principle made by the Government on May 6, 2010 regarding TVO's application to construct a fourth nuclear power plant unit (Olkiluoto 4) in Olkiluoto. According to the decision-in-principle, it will expire unless an application for a construction license is submitted a maximum of five years after the date of Parliament's decision to approve the decision-in-principle.

On May 20, 2014, TVO submitted an application to the Government asking for a new time limit for submitting the construction license application. On September 25, 2014, the Government rejected TVO's application.

TVO's Extraordinary General Meeting on June 24, 2015 decided, as proposed by the Company's Board of Directors, not to apply for a construction license for OL4 during the validity of the decision-in-principle and not to carry out the project referred to in the contractual undertaking which the shareholders and TVO signed earlier for the bidding and engineering phase.

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 does not affect TVO's consolidated profit/loss, as TVO has invoiced the impairment charge form the shareholders in proportion to their shareholder loans to OL4. The impairment charge invoiced from the shareholders is presented under other income. TVO has settled the invoices against the OL4 shareholder loans and has refunded EUR 1.8 million to the shareholders. On September 30, 2015, there are no remaining OL4 shareholder loans or shareholder loan commitments.

TVO will remain prepared for applying for a new decision-in-principle for OL4. The application is subject to a separate decision.

# Nuclear fuel

In 2015, the nuclear fuel purchases amounted to EUR 65.7 (54.9) million and the amount consumed to EUR 52.9 (51.4) million.

The nuclear fuel and uranium stock carrying value on December 31, 2015 was EUR 224.2 (December 31, 2014: 211.4) 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 nuclear waste management program for the Olkiluoto and Loviisa power plants for 2016–2018 was completed. The nuclear waste management program, which is prepared every three years, contains the main objectives and tasks for nuclear waste management for 2016–2021.



The liabilities in the consolidated financial statement show a provision related to nuclear waste management liability of EUR 971.2 (December 31, 2014: 930.3) 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 to the end of 2015 and the Company's funding target for 2016 at EUR 1,369.4 (1,345.4) million.

In March 2015, the Finnish State Nuclear Management Fund confirmed TVO's nuclear waste management fee for 2014 at EUR 20.8 (56.1) million, which was paid into the Fund on March 31, 2015 (March 31, 2014). The nuclear waste management fee for 2015 will be confirmed in March 2016.

A total of 6,321 (6,214) m<sup>3</sup> of low- and medium-level radioactive waste has accumulated from the OL1 and OL2 plant units during their operation. During 2015, the amount of waste increased by 107 m<sup>3</sup>. The waste is disposed of in the final repository for low- and medium-level waste (VLJ repository) in Olkiluoto.

The total amount of spent nuclear fuel by the end of the year was 1,432 (1,397) tons, of which 35 (34) tons accumulated in 2015. The spent fuel is stored in the fuel pools of the plant units and in an interim storage facility (the KPA storage facility) at Olkiluoto.

## 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. TVO owns 60 percent of Posiva and Fortum Power and Heat 40 percent.

The Radiation and Nuclear Safety Authority Finland (STUK) issued a positive safety evaluation for Posiva's construction license application in February, and the Government granted a construction license for Posiva's final disposal repository and encapsulation plant in November 2015. The company is now moving on from the research, development and engineering work to the construction of the final disposal facility in Olkiluoto.

Equipping the underground ONKALO research facility with technical facilities and systems is for the most part complete, and the construction work for the second phase of the hoist building has been completed. In December, Posiva and KONE Hissit Oy signed a contract on the delivery of a passenger elevator for ONKALO.

In the DOPAS research project, coordinated by Posiva and partly funded by the EU, casting work for the concrete sealing plug for final disposal tunnels, which is under Posiva's responsibility, has been completed.

In November, Posiva announced a plan to launch a service business aiming at offering expertise services on global markets.

## Coal power

TVO has a 45 percent holding in the Meri-Pori coal-fired power plant owned and operated by Fortum Power and Heat Oy. The Meri-Pori power plant is located on the Tahkoluoto island in Pori, Finland.



## Meri-Pori

The amount of electricity produced by TVO's share at the Meri-Pori coal-fired power plant was 167.2 (399.7) GWh requiring 60.7 (144.9) thousand tons of coal and 138.7 (334.4) thousand tons of carbon dioxide emission rights.

## Research and development

Research and development costs were EUR 17.2 (18.4) million, most of which was used for R&D activities related to nuclear waste management.

TVO is a major financier of Finnish public sector research programs for reactor safety and nuclear waste management. In 2015, TVO's contribution to the Finnish State Nuclear Waste Management Fund, which finances such programs, amounted to EUR 4.7 (4.7) million.

# Acquisitions of tangible and intangible assets and shares

Investments in 2015 were EUR 345.2 (338.5) million. Investments of the parent company were EUR 344.3 (339.4) million, of which EUR 297.7 (292.9) 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.

- With the contract signed with Wärtsilä Finland Oy in May 2013, TVO is replacing by the end of 2022 the original eight emergency diesel generators and associated auxiliary systems of OL1 and OL2 plant units. In addition, a ninth diesel generator will be acquired, for which a building is currently under construction. An agreement for the construction works was made with Skanska Talonrakennus Oy at the end of May. The emergency diesel project is the largest plant modification project ever carried out in Olkiluoto.
- In July 2014, TVO signed a contract with Westinghouse Electric Sweden (WSE) for the replacement of the main circulation pumps at OL1 and OL2. The replacement of the pumps will be carried out on a turnkey basis. The main circulation pumps will be replaced during the annual outages of 2016–2018.
- In June, an agreement was made with SPX Clyde Union regarding pump systems to be installed at OL1 and OL2 plant units. The pumps are driven by steam generated in the reactor, and they operate also under complete blackout conditions and even when submerged.

Carbon dioxide emission allowances have been relinquished to the Energy Market authority worth EUR 1.9 (2.7) million. In 2015, emission allowances were acquired worth EUR 1.2 (1.9) million. The Company's need for carbon dioxide emission allowances for the period under review was covered by acquired emission allowances.

# Safety and environmental issues

The Olkiluoto nuclear power plant units operated safely during the year. No incidents with a major impact on nuclear safety occurred. In 2015, six special reports were prepared for the Radiation and Nuclear Safety Authority (STUK). Five events were classified on the international INES scale (0–7) at level 0 (No safety significance) and one was classified at level 1 (Minor problem, significant safety margin remaining).



TVO's operations were in accordance with the Company's environmental policy, environmental permits, and environmental management system. Its environmental management system, which also covers the construction phase of the OL3 unit, complies with the international ISO 14001 Standard and with the Energy Efficiency System, and is also EMAS registered.

The environmental load caused by the Olkiluoto nuclear power plant was minor. As in previous years, radioactive emissions into the atmosphere and water were extremely low, and significantly lower than the limits set by the authorities.

TVO's operations were developed considering the requirements of the environmental permit and according to the environmental management system. The Company has identified seven significant environmental aspects related to its activities, and the harmful impacts are being minimized in each phase of the electricity production chain. According to the continuous improvement principal, objectives and targets are determined for the operations, and their achievement status is being regularly monitored within the Company's environmental group consisting of experts from several different fields. Corrective actions are defined whenever necessary. Within the reporting year, no significant environmental deviation occurred. Overall, 27 minor environmental observations or minor deviations were detected during the operating cycle, and nine at the OL3 construction site. These all related to minor hydraulic oil leakages and the processing and reporting of chemicals or waste.

TVO has a certified occupational health and safety system compliant with the OHSAS 18001 Standard, in which also the activities at the OL3 construction site are included. The occupational safety goal on the whole Olkiluoto island is zero accidents and common working methods. As in earlier years, actions to reach the zero-accident goal were continued, and the systems integration will provide a basis for common working methods.

More detailed information on the environmental issues and indicators as well as occupational safety indicators for 2015 will be reported in the Corporate Social Responsibility Report and Environmental Report which will be published on TVO's website www.tvo.fi. The contents of the reports will be verified by an outside body.

# Group personnel and training

## Personnel

At the year-end, the total number of personnel in the Group was 749 (809), and the average during the year was 794 (863). The year-end total number of personnel in the Company was 748 (805), and the average during the year was 791 (858). The year-end total for permanent personnel was 730 (751).

TVO recruited 69 (33) employees in 2015. During the year, 90 (44) permanent employees left the Company, including 28 (25) who retired.

In connection with a business transfer, Posiva's support functions and part of safety functions (a total of 30 persons) transferred from Posiva to TVO in the beginning of January 2015. The business transfer was related to TVO operations development project in which functions were centralized in order to improve flexibility and efficiency.

TVO's co-operation negotiations initiated in the beginning of January 2015 concluded at the end of February. The negotiations focused on reorganizing functions and improving cost efficiency with the view to secure TVO's competitive edge on the challenging electricity supply market. The aim is to generate savings of EUR 15 million per year. Prior to the negotiations, the estimated maxi¬mum need of personnel reductions was 110 man-years. Through the negotiations, the number of personnel was cut by 42 employees, including 11 terminated contracts. Other personnel reductions achieved through voluntary arrangements so that the total amount of reductions was approximately 100 man-years. The co-operation negotiations concerned the near-entire TVO personnel except operational or safety related positions.



In April 2015, TVO introduced a new operating model and organizational structure. This, together with the changes described above affected to the fact that many people changed tasks during 2015. In connection with the launch of the organizational reform and new operating model, personnel were also encouraged to change tasks.

The collective agreements for different groups of personnel in the energy industry will be in force in accordance with the so called framework agreement of labor confederations until January 31, 2017.

The human resource issues and indicators for 2015 will be reported in more detail in the Corporate Social Responsibility Report on TVO's website, www.tvo.fi. The contents of the report will be verified by an outside body.

## **Training**

The basic, continuing and further training of TVO employees was implemented according to the annual training program the same way as in previous years. The personnel was trained for a total of 7,392 (7,272) days, on average 9.3 (8.5) days per each TVO employee.

The operators of OL1 and OL2 participated in operation training days and advanced simulator courses in the spring and autumn 2015 according to their refresher training program. A basic simulator course was arranged according to plan for a training group of operators who started in 2014.

The operators of OL3 participated in operation training days in the spring and autumn 2015 according to their refresher training program. The OL3 operators work in shifts in the combined operating organization of the Supplier and TVO, performing system operation and monitoring tasks. OL3 operators also participated in the extensive inspection and preparation work of OL3 operating instructions during 2015.

Everyone working in the Olkiluoto nuclear power plant area must participate in induction training. The general part is intended for all persons working in the Olkiluoto area and the radiation part for those working in the controlled area. During 2015, a total of 3,576 (2,238) people took the general part of the induction training and 956 (900) people the radiation protection part (those recorded by January 13, 2016). Both training courses were offered in Finnish and English. Both parts are also available in the external online learning environment for revision in Finnish and English.

Matters and indicators concerning the development of the personnel's competences in 2015 will be reported in more detail in the Corporate Social Responsibility Report, which will be available on the TVO website at www.tvo.fi. The information in the report will be verified by an outside party.

## Subsidiaries and joint ventures

TVO Nuclear Services Oy (TVONS) is a wholly-owned subsidiary of TVO. TVONS provides its customers with expertise and services related to high-level nuclear safety, cost-effective operations, and nuclear waste management. The special expertise of TVO personnel is at TVONS customers' disposal.

Posiva Oy, jointly owned by TVO and Fortum, is responsible for the research of the final disposal of spent nuclear fuel and implementation of the final repository of its shareholders' Olkiluoto and Loviisa NPPs. TVO owns 60 percent of Posiva. Posiva continued construction and equipment of the underground research facility for final disposal according to plan. The Finnish Government granted a construction license for Posiva's final disposal repository and encapsulation plant in November 2015.



# Major events after the end of the year

On February 2, 2016, TVO signed a new revolving credit 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 and will serve as the core relationship facility for the future.

In the International Chamber of Commerce (ICC) arbitration proceedings concerning the delay in the OL3 Project, the Supplier updated its monetary claim in February 2016. The Supplier's monetary claim is now 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.

In February 2016, Japan Credit Rating Agency (JCR) decided to keep TVO's credit rating unchanged at AA-. TVO's outlook JCR estimated to be stable.

# Prospects for the future

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 of the process systems is planned to start in the spring. At the same time, the operating license application will be submitted to the Finnish Ministry of Employment and the Economy. TVO will continue 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 utilization rate of the Meri-Pori coal-fired power plant varies annually. All incurred costs will be charged from the shareholders in the price of electricity. 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.

Posiva is preparing to start the construction projects of the encapsulation plant and final repository.

# Proposals to the Annual General Meeting

Teollisuuden Voima Oyj's distributable equity as of December 31, 2015 amounted to EUR 9,360,000. The Board of Directors proposes to the Annual General Meeting that no dividend shall be paid.



# Key figures of TVO Group

TVO GROUP (IFRS) (M€)	2015	2014	2013	2012	2011
Turnover	276	327	366	352	352
Profit/loss for the financial year	5	-1	31	-2	6
Research expenses	17	18	21	24	25
Investments	345	339	335	337	316
Equity	1 612	1 575	1 462	1 310	1 083
Subordinated shareholder loans (hybrid equity) (included in the former) 2) 4)	479	439	339	229	0
Non-current and current interest-bearing liabilities (excluding loan from VYR) 1)	3 654	3 428	3 221	3 166	2 847
Loans from equity holders of the company 2) 4)	0	0	0	0	179
Loan from VYR	1 009	983	932	882	843
Provision related to nuclear waste management	971	930	898	858	832
Balance sheet total	7 464	7 054	6 700	6 397	5 939
Equity ratio (%) 3)	29,4	30,6	30,0	28,1	29,6
Average number of personnel	794	863	894	884	853

<sup>1)</sup> The Finnish State Nuclear Waste Management Fund (VYR)

equity + loans from equity holders of the company

a loan = 100 x balance sheet total - provision related to nuclear waste management - loan from the Finnish State Nuclear Waste Management Fund

<sup>4)</sup> During the accounting period 2012, the terms of the loans of the equity holders of the Company have been changed and the loans are included in equity according to IFRS standards.

CONSOLIDATED ADJUSTED PROFIT/LOSS FOR THE FINANCIAL YEAR (M€)	2015	2014	2013	2012	2011
Profit/loss for the financial year (IFRS)	5	-1	31	-2	6
The impact of the nuclear waste management obligation 1) (profit -/loss +)	3	6	-29	4	3
The impact of financial instruments 2) (profit -/loss +)	0	0	-1	-1	-1
Other IFRS adjustments	-1	0	0	0	0
Profit/loss before appropriations	7	5	1	1	8
Adjusted profit/loss for the financial year	7	5	1	1	8

<sup>1)</sup> Includes profit/loss effects from nuclear waste management according to IFRS standard.

<sup>&</sup>lt;sup>2)</sup> Includes effects from financial derivatives hedging future cash-flows where hedge accounting is not applied according to IAS 39.

	2015	2014	2013	2012	2011
TVO's share in the Finnish State Nuclear Waste Management Fund (VYR) (M€)	1 357,8	1 324,2	1 253,3	1 198,9	1 145,1
TVO's funding target obligation to the Finnish State Nuclear Waste Management Fund	1 369,4	1 345,4	1 310,4	1 242,3	1 179,1
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	971,2	930,3	897,9	857,6	831,8

The difference between the funding target and the share in the Finnish State Nuclear Waste Management Fund at the end of each year is due to the funding target being completed by paying the nuclear waste management fee only during the first quarter of the following year.

<sup>&</sup>lt;sup>2</sup>) Subordinated loans



# Key figures of Teollisuuden Voima Oyj

Parent company's financial statement has been prepared in					
accordance with the Finnish Accounting Standards (FAS).	2015	2014	2013	2012	2011
Turnover	273	325	363	347	347
Profit/loss before appropriations	7	5	1	1	8
Fuel costs	59	66	73	62	67
Nuclear waste management costs	38	51	89	77	68
Capital expenditure (depreciation and financial income and expenses)	111	59	61	65	68
Investments	344	339	303	337	314
Equity	858	858	858	858	858
Appropriations	180	173	167	166	165
Non-current and current interest-bearing liabilities (excluding loan from VYR) 1)	3 509	3 288	3 088	2 968	2 743
Loans from equity holders of the company 2)	479	439	339	229	179
Loan from VYR	1 009	983	932	882	843
Balance sheet total	6 252	5 879	5 572	5 283	4 944
Equity ratio (%) 3)	28,9	30,0	29,4	28,5	29,3
Average number of personnel	791	858	890	879	847

<sup>1)</sup> The Finnish State Nuclear Waste Management Fund (VYR)

equity + appropriations + loans from equity
holders of the company

balance sheet total - loan from the Finnish State Nuclear
Waste Management Fund

#### Electricity delivered to equity holders of the company (GWh)

Olkiluoto 1	7 387	7 254	7 458	6 935	7 253
Olkiluoto 2	6 851	7 486	7 148	7 441	6 876
Total Olkiluoto 1)	14 238	14 740	14 606	14 376	14 129
Meri-Pori	167	400	725	477	815
Total	14 405	15 140	15 331	14 853	14 944

 $<sup>^{1)}</sup>$  Includes wind power 1.4 (0.7 in 2014) GWh and gas turbine power 0.3 (0.3) GWh.

#### Capacity factors, %

Olkiluoto 1	96,2	94,5	97,1	90,4	94,8
Olkiluoto 2	89,2	97,4	93,1	96,9	90,9
Total capacity factor	92,7	96,0	95,1	93,7	92,8
TVO share of the electricity used in Finland, %	17,5	18,2	18,2	17,4	17,7

<sup>2)</sup> Subordinated loans



# TVO Group financial statements

# Consolidated income statement

EUR 1 000	Note	1 Jan-31 Dec 2015	1 Jan-31 Dec 2014
Turnover	3	275 746	327 209
Work performed for own purpose	4	9 137	13 100
Other income	5	96 950	9 600
Materials and services	6	-71 647	-98 744
Personnel expenses	7	-59 186	-61 556
Depreciation and impairment charges	3,8	-114 615	-57 716
Other expenses	9	-89 036	-89 225
Operating profit/loss		47 349	42 668
Finance income	10	22 284	26 214
Finance expenses	10	-65 008	-69 572
Total finance income and expenses	3	-42 724	-43 358
Profit/loss before income tax		4 625	-690
Income taxes	11	0	-2
Profit/loss for the financial year		4 625	-692
Profit/loss for the financial year attributable to:			
Equity holders of the company		4 625	-692

# Consolidated statement of comprehensive income

4 625	-692
-23 412	1 910
19 911	16 352
-3 501	18 262
1 124	17 570
1 124	17 570
	-3 501 1 124



# Consolidated balance sheet

EUR 1 000	Note	31 Dec 2015	31 Dec 2014
Assets			
Non-current assets			
Property, plant and equipment	12	4 852 768	4 628 318
Intangible assets	13	7 128	7 893
Loans and other receivables	16	1 012 464	986 367
Investments in joint ventures	14	1 009	1 009
Investments in shares	17	1 934	25 857
Derivative financial instruments	20	110 469	74 198
Share in the Finnish State Nuclear Waste Management Fund	24	971 241	930 260
Total non-current assets		6 957 013	6 653 902
Current assets			
Inventories	19	250 420	239 531
Trade and other receivables	16	31 496	33 900
Derivative financial instruments	20	4 441	13 395
Fund units	18	100 385	C
Cash and cash equivalents	18	120 236	113 418
Total current assets		506 978	400 244
Total assets		7 463 991	7 054 146
Equity and liabilities			
Capital and reserves attributable to equity holders of the company			
Share capital	21	606 193	606 193
Share premium reserve and statutory reserve	21	242 383	242 383
Fair value and other reserves	21	12 581	16 082
Subordinated shareholder loans (hybrid equity)	21	479 300	439 300
Retained earnings	21	271 542	271 160
Total equity		1 611 999	1 575 118
Liabilities			
Non-current liabilities			
Provision related to nuclear waste management	24	971 241	930 260
Loan from the Finnish State Nuclear Waste Management Fund	22	1 009 050	982 800
Bonds	22	2 480 900	2 250 999
Other financial liabilities	22	642 370	723 997
Derivative financial instruments	20,22	37 030	46 003
Total non-current liabilities		5 140 591	4 934 059
Current liabilities			
Current financial liabilities	22	493 307	401 752
Derivative financial instruments	20,22	755	5 471
Advance payments received	23	22 241	19 425
Trade payables	23	12 971	8 327
Other current liabilities	23	182 127	109 994
Total current liabilities	<u> </u>	711 401	544 969
Total liabilities		5 851 992	5 479 028
Table 1 and 10 at 100 a			
Total equity and liabilities		7 463 991	7 054 146



# Consolidated statement of changes in total equity

EUR 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 Jan 2015	606 193	242 383	16 082	439 300	271 160	1 575 118	1 575 118
Profit/loss for the financial year	0	0	0	0	4 625	4 625	4 625
Other comprehensive profit/loss items:							
Changes in fair values of the available-for-sale-investments	0	0	-23 412	0	0	-23 412	-23 412
Cash flow hedges	0	0	19 911	0	0	19 911	19 911
Subordinated shareholder loans (hybrid equity)	0	0	0	40 000	0	40 000	40 000
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-4 243	-4 243	-4 243
Equity 31 Dec 2015	606 193	242 383	12 581	479 300	271 542	1 611 999	1 611 999
EUR 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 Jan 2014	606 193	242 383	-2 181	339 300	275 927	1 461 622	1 461 622
Profit/loss for the financial year	0	0	0	0	-692	-692	-692
Other comprehensive profit/loss items:							
Changes in fair values of the available-for-sale-investments	0	0	1 910	0	0	1 910	1 910
Cash flow hedges	0	0	16 352	0	0	16 352	16 352
Subordinated shareholder loans (hybrid equity)	0	0	0	100 000	0	100 000	100 000
Interest paid of subordinated shareholder loans (hybrid equity)	0	0	0	0	-4 075	-4 075	-4 075
Equity 31 Dec 2014	606 193	242 383	16 082	439 300	271 160	1 575 118	1 575 118



# Consolidated cash flow statement

EUR 1 000	Note	2015	2014
Operating activities			
Profit/loss for the financial year		4 625	-692
Adjustments:			
Income tax expenses		1	2
Finance income and expenses		42 724	43 358
Depreciation and impairment charges		114 615	57 716
Other non-cash flow income and expenses		-43 493	-36 511
Sales profit/loss of property, plant and equipment and shares		-27 978	-156
Changes in working capital:			
Increase (-) or decrease (+) in non-interest-bearing receivables		525	-6 046
Increase (-) or decrease (+) in inventories		-10 889	3 560
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities		-2 705	-42 049
Interest paid and other finance expenses		-6 775	-13 600
Dividends received		1 219	1 036
Interest received		10 001	7 421
Taxes paid		-1	-2
Cash flow from operating activities		81 869	14 037
Investing activities			
Acquisition of property, plant and equipment		-256 586	-340 139
Proceeds from sale of property, plant and equipment		6	7
Acquisition of intangible assets		-1 095	-523
Acquisition of shares		-135	-33
Proceeds from sale of shares		28 248	280
Loan receivables granted		-26 234	-51 209
Repayments of loans granted		274	422
Cash flow from investing activities		-255 522	-391 195
Financing activities			
Withdrawals of subordinated shareholder loans (hybrid equity)		100 000	100 000
Repayment of subordinated shareholder loans (hybrid equity)		-60 000	0
Withdrawals of long-term loans		526 250	752 830
Repayment of long-term loans		-164 309	-581 635
Investments in fund units		-100 000	0
Interest paid of subordinated shareholder loans (hybrid equity)		-4 311	-3 854
Increase (-) or decrease (+) in interest-bearing receivables		12	20
Increase (+) or decrease (-) in current financial liabilities		-117 171	78 848
Cash flow from financing activities		180 471	346 209
Change in cash and cash equivalents		6 818	-30 949
Cash and cash equivalents 1 Jan		113 418	144 367
Cash and cash equivalents 31 Dec	18	120 236	113 418



## Notes to the consolidated financial statements

# 1 General information on the Group

Teollisuuden Voima Oyj together with its subsidiary forms the TVO Group. The ultimate parent of the Group is Teollisuuden Voima Oyj, domiciled in Helsinki.

Teollisuuden Voima Oyj is a public limited liability company owned by Finnish industrial and power companies. In accordance with its Articles of Association, TVO delivers electricity to its shareholders at cost price (so-called Mankala principle), i.e. delivers the electricity produced or procured to its shareholders in proportion to their shareholdings in each series. Each of the shareholders of each series is liable for variable and fixed annual costs that are specified in detail in the Articles of Association. The Company owns and operates two nuclear power plant units (OL1 and OL2) and has a third unit (OL3) under construction at Olkiluoto in the municipality of Eurajoki. In addition to the nuclear power plant in Olkiluoto, TVO has a share in the Meri-Pori coal-fired power plant and in a gas turbine plant and owns a wind power plant in Olkiluoto.

Copies of the consolidated financial statements are available at the internet address www.tvo.fi.

These consolidated financial statements were authorized for issue by the Board of Directors of TVO in its meeting on 29 February 2016. Under the Finnish Limited Liability Companies Act the Shareholders' meeting may modify or reject the financial statements.

## 2 Accounting policies

## Basis of preparation

These consolidated financial statements of TVO Group have been prepared in accordance with International Financial Reporting Standards (IFRS). These financial statements have been prepared in accordance with the IAS and IFRS standards and SIC and IFRIC interpretations effective at 31 December 2015. In the Finnish Accounting Act and regulations issued by virtue of it, "IFRS" refers to the standards and interpretations which have been endorsed by the EU in accordance with the procedure defined in the EU Regulation (EY) No. 1606/2002.

The consolidated financial statements have been prepared under the historical cost convention, except for fund units and investments in shares and derivative financial instruments, which are recognized at fair value.

The consolidated financial statements are presented in euros, which is the functional and presentation currency of the Group's parent company.

The consolidated financial statements have been prepared according to the same accounting policies as in 2014. The Group has adopted the following new standards, interpretations and amendments to existing standards and interpretations on 1 January 2015:

- Annual improvements to IFRSs 2010 2012 and 2011 2013
  The improvements have not had significant impact on the consolidated financial statements.
- IAS 19 (amendment) Employee benefits: Defined benefit plans
  The amendments clarify the accounting for defined benefit plans that require employees or third parties to contribute towards the cost of the benefits. The amendment has not had significant impact on the consolidated financial statements.



#### IFRIC 21 Levies

This is an interpretation of IAS 37, Provisions, contingent liabilities and contingent assets. The interpretation has not had significant impact on the consolidated financial statements.

The following new standards, interpretations and amendments to existing standards and interpre-tations issued already will be adopted by the Group in 2016 or later:

- IFRS 11 (amendment) Joint arrangements
- IAS 16 (amendment) Property, plant and equipment and IAS 38 Intangible assets
- IAS 16 (amendment) Property, plant and equipment and IAS 41 Agriculture
- IFRS 10 (amendment) Consolidated financial statements and IAS 28 Associates and joint ventures 1)
- IFRS 10 (amendment) Consolidated financial statements, IFRS 12 Disclosure of interests in other entities and IAS 28
   Associates and joint ventures <sup>1)</sup>
- IAS 27 (amendment) Separate financial statements
- IAS 1 (amendment) Presentation of financial statements
- Annual improvements 2012-2014
- IFRS 15 Revenue from contracts with customers <sup>2)</sup>
- IFRS 9 Financial instruments 2)

Management is assessing the impact of these changes on the financial statements of the Group.

## Companies included in the consolidated financial statement

### **Subsidiaries**

The consolidated financial statements include Teollisuuden Voima Oyj (TVO) and its subsidiary TVO Nuclear Services Oy. Subsidiaries are companies in which the Group has control at the end of the financial period. Control exists if the Group holds more than a half of the voting rights or otherwise has control. Subsidiaries acquired are consolidated from the date on which control is transferred to the Group, and subsidiaries sold are no longer consolidated from the date that control ceases.

The purchase method of accounting is used to consolidate subsidiaries into the Group. The purchase price is determined as the aggregate of the acquisition date fair values of the assets given as consideration and liabilities incurred or assumed. Costs directly attributable to the acquisition are recognized in profit or loss.

In the consolidation, intercompany share ownership, intercompany transactions, receivables, liabilities, unrealized gains and internal distributions of profits are eliminated. Unrealized losses are not eliminated, if the losses are due to impairment of the asset being transferred. To ensure consistency, subsidiaries' accounting policies have, in all material respects, been changed to conform to the accounting policies adopted by the Group.

### Joint ventures

The Group applies IFRS 11 to all joint arrangements. Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations each investor. TVO has assessed

<sup>1)</sup> The standard, interpretation or amendment to published standard or interpretation is still subject to endorsement by the European Union. Effective date will be 1 January 2016.

<sup>&</sup>lt;sup>2)</sup> The standard, interpretation or amendment to published standard or interpretation is still subject to endorsement by the European Union. Effective date will be 1 January 2018.



the nature of its joint arrangement and determined it to be joint venture. Posiva Oy is a joint venture of TVO, which has a 60 per cent interest in it. Both ventures are liable for its main activities, final disposal of spent fuel of nuclear power plants, in proportion to their own usage. Interest in joint venture is accounted for by the equity method of accounting.

Under the equity method of accounting, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures, the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealized gains on transactions between the Group and its joint venture are eliminated to the extent of the Group's interest in the joint ventures. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Account policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

## Segment reporting

The Group has two reportable segments; nuclear power and coal power. The Board of Directors is the chief operation decision maker.

## Revenue recognition principles

TVO operates on a cost-price principle. Revenue is recognized based on the consideration received when electricity is delivered or services are rendered. Revenue is presented net of indirect sales taxes. Revenue is recognized as follows:

#### Sales of electricity and other revenue

Revenue on sales of electricity is recognized based on delivery. The recognized income for shareholders is based on the quantities delivered. The revenue from services is recognized on an accrual basis on the accounting period when the services are rendered to the customer.

Revenue on long-term consulting services projects that spread over several accounting periods is recognized based on the proportion of costs incurred from work performed up to the balance sheet date and the estimated total expenses of the project. If it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

#### Other income

Revenue from activities outside the ordinary course of business is reported as other income. This includes joint ventures' revenue from services, rental income and non-recurring items, such as gains from sales of property, plant and equipment. Rental income is recognized on a straight line basis over the rental period and gains from sales of property, plant and equipment when the significant risks and rewards of ownership, interests and control have been transferred to the buyer.

## Government grants

Grants are recognized at their fair value, when the Group meets all the conditions attached to them and where there is a reasonable assurance that the grant will be received. Government grants relating to costs are deferred on the balance sheet and recognized in the income statement over the period in which their relevant costs are recorded. Government grants relating to the purchase of property, plant and equipment are deducted from the acquisition cost of the asset.



## Research and development costs

Research and development costs (except R&D costs related to nuclear waste management) of the Group are recognized as an expense as incurred and included in other expenses in the income statement. Development costs are capitalized if it is assured that they will generate future income, in which case they are capitalized as intangible assets and amortized over the period of the income streams. Currently the Group does not have any development costs that would qualify for capitalization.

Research costs that relate to nuclear waste management are discussed in paragraph Assets and provisions related to nuclear waste management obligations.

## Property, plant and equipment

Property, plant and equipment of the Group are stated on the consolidated balance sheet at historical cost less grants received, accumulated depreciation and impairment charges, if any. Historical cost includes expenditure that is directly attributable to the acquisition of an item.

In the historical costs of power plant projects and other significant investments (completion time more than a year) the financing costs incurred during the construction period will be included.

The historical costs of nuclear power plants include furthermore the estimated costs of dismantling and removing an item and restoring the site on which it is located (more information is included in paragraph Assets and provisions related to nuclear waste management obligations).

Land and water areas are not depreciated.

Other property, plant and equipment are depreciated using the straight-line method over their estimated useful lives.

Straight-line depreciation is based on the following estimated useful lives:

OL1 and OL2 nuclear power plant units:

- Basic investment 61 years

- Investments made according to the modernization program 21 - 35 years

- Automation investments associated with the modernization 15 years

- Additional investments 10 years

Buildings and structures 10 - 40 years

TVO's share in the Meri-Pori coal-fired plant:

- Basic investment- Additional investments25 years10 years

Wind power plant 10 years

TVO's share in the Olkiluoto gas turbine power plant 30 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate to reflect the changes in expectations of economic benefits.



Costs of renewal of an item or a part of an item of property, plant and equipment are capitalized if the part is accounted for as a separate item. Otherwise, the subsequent expenditure is included in the carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Group.

Annual repair and maintenance costs are recognized in profit or loss, when they occur. Investments connected with the modernization and maintenance of the power plant units are capitalized.

OL3 is nuclear power plant unit under construction. All the realized costs on the OL3 project that meet recognication criteria are shown as incomplete plant investment. See note 12 Property, plant and Equipment.

## Intangible assets

Intangible assets are shown at historical cost less grants received, accumulated amortization and impairment losses if applicable. Historical cost includes costs directly attributable to the acquisition of the particular asset.

Other long-term expenditure included in intangible assets are amortized on a straight-line basis over their estimated useful lives. These include computer software and certain payments made for the use of assets.

The amortization periods of the intangible assets are as follows:

Computer softwareOther intangible assets10 years

The amortization period of an intangible asset is changed where necessary if the estimated useful life changes from that previously estimated.

Furthermore, intangible assets include carbon dioxide (CO<sub>2</sub>) emission rights. Emission rights are recognized at historical cost, and are presented under emission rights. The current liability for returning emission rights is recognized at the carrying value of possessed emission rights. If there is a shortfall, a current liability is recognized to cover the acquisition of the missing emission rights. This current liability is valued at the current market value of the emission rights at the balance sheet date. The cost of the emission rights is recognized in the income statement under costs of materials and services. The gains from the sales of emission rights are refunded to the equity holders of the company.

## Impairment of property, plant and equipment and intangible assets

The Group assesses at each balance sheet date whether there are indications that the carrying amount of an asset may not be recoverable. If such indications exist, the recoverable amount of the asset in question will be measured. For the purposes of assessing impairment, assets are examined at the level of cash-generating units, that is, at the lowest level that is mainly independent of other units and for which there are separately identifiable cash flows and largely independent from those of corresponding units.

The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. The value in use is determined by reference to discounted future cash flows expected to be generated by the asset. The discount rate used is pre-tax and reflects the time value of money and asset specific risks.

Impairment loss is recognized when the carrying amount of the asset is greater than its recoverable amount. Impairment loss is charged directly to the income statement. If a cash-generating unit is subject to an impairment loss, it is allocated first to decrease the goodwill and subsequently, to decrease the other assets of the unit. At recognition of the impairment loss, the useful life of the reamortized assets is reassessed. Impairment loss of other assets than goodwill is reversed in the case



that a change has occurred in the estimates used in measuring the recoverable amount of the asset. The increased carrying amount must not, however, exceed the carrying amount that would have been determined had no impairment loss been recognized in prior years.

#### Inventories

Inventories are measured at acquisition cost. The acquisition cost comprises raw materials, direct labor and other direct costs. The carrying amount of inventories is not reduced to a value that is less than its acquisition cost, as TVO operates at cost price, so the net realizable value of inventories always covers their acquisition cost. The cost of coal is determined by using the FIFO (first in, first out) method and the cost of supplies is determined by using the rolling weighted average cost formula. The use of nuclear fuel is recognized according to calculated consumption.

#### Leases

#### **Finance leases**

Leases are classified as finance leases when all substantial risks and rewards incidental to ownership are transferred to the Group. Assets acquired under finance leases are recognized in the balance sheet at the commencement of the lease term at the fair value of the leased asset or, if lower, the present value of the minimum lease payments. Leased assets are depreciated over the shorter of the useful life of the asset and the lease term. Lease obligations are recognized under interest-bearing liabilities.

Lease payments are apportioned during the lease term between the finance charge and the reduction of the outstanding liability to produce a constant periodic rate of interest on the remaining balance of the liability.

#### Other leases

Lease payments under other leases are recognized in the income statement as an expense under the accrual principle on a straight-line basis over the lease term.

Lease payments received are recognized as income on a straight-line basis over the lease term and presented in the income statement under other income.

#### Financial assets

The Group has classified its financial assets into four categories as following: derivative financial instruments at fair value through profit or loss, derivative financial instruments designated as cash flow and fair value hedges, loans and other receivables, and available-for-sale investments. The classification is based on the purpose of the acquisition of the assets, and the assets are classified at initial acquisition.

Transaction costs are included at original book value of financial assets, except for items that are measured at fair value through profit or loss. All purchases and sales of financial assets are recognized at fair value on the trading date.

Financial assets are derecognized when the contractual rights to the cash flows of the investment expire or have been transferred or the Group has substantially transferred all the risks and benefits of ownership.



#### Derivative financial instruments at fair value through profit or loss

Derivative financial instruments that do not meet the criteria for hedge accounting according to IAS 39 are booked at fair value to profit or loss. Gains and losses from changes in fair value are recognized in the income statement in the period in which they arise, except when they relate to the construction of OL3 power plant and are capitalized as part of the cost of the asset.

### Derivative financial instruments designed as cash flow and fair value hedges

Financial assets include derivative financial instruments (see Derivative financial instruments and hedge accounting).

#### Loans and other receivables

Loans and other receivables include non-current loans and other receivables as well as current trade and other receivables. Items that mature after 12 months are recognized in non-current assets. After initial recognition, all loans and other receivables are measured at amortized cost using the effective interest method. Trade receivables are recognized on the balance sheet at their original nominal value, which reflects their fair value.

#### Available-for-sale investments

Available-for-sale investments include investments in shares, fund units, and instruments that mature after 3 months excluding fixed-term deposits which are recognized in loans and other receivables. Items maturing after 12 months are recognized in non-current assets. Available-for-sale investments are measured at fair value, and the changes in fair value are recognized in other comprehensive items in the fair value reserve under equity. The changes in fair value are transferred from equity to the income statement when the investment is sold or when it is impaired so that an impairment loss needs to be recognized. Investments in unquoted shares whose fair value cannot be reliably determined are measured at acquisition cost.

### Cash, cash equivalents and fund units

Cash and cash equivalents consist of cash on hand, demand deposits and other current, highly liquid investments. Assets classified as cash and cash equivalents have a maturity of three months or less from the date of acquisition. Fund units consist of fund units investments which are classified at fair value.

#### Impairment of financial assets

At each closing date, the Group estimates whether there is any objective evidence that a financial asset or group of financial assets is impaired. If the fair value of equity investment is significantly below its acquisition cost at the closing date, this is evidence of the impairment of equities classified as available-for-sale. If any evidence exists of the impairment, any loss accumulated in the fair value reserve is transferred into profit or loss. Impairment losses on equity investments classified as available-for-sale are not reversed through profit or loss, whereas subsequent reversals of impairment losses on interest-bearing instruments are recognized in profit or loss. The Group recognizes an impairment loss on trade receivables when there is objective evidence that the receivable is not fully collectible.

Evidence of impairment may include indications that the counterparty is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

### Financial liabilities

Financial liabilities are initially recognized at fair value including related transaction costs. After initial recognition, all financial



liabilities are measured at amortized cost using the effective interest method. Financial liabilities include non-current and current liabilities, and they can be interest-bearing or non-interest-bearing. An item is included in current liabilities if it matures within 12 months from the closing date. Financial liabilities also include derivative financial instruments (see Derivative financial instruments and hedge accounting).

## Derivative financial instruments and hedge accounting

The Group uses derivative financial instruments as hedges of the currency risk relating to purchases of fuel and the currency and interest rate risk of loans. The derivative financial instruments are recognized at fair value on the date when the Group becomes a party to a derivative contract, and subsequently measured at fair value on closing date.

Hedge accounting referred to in IAS 39 is applied to instruments entered into for the purpose of hedging of the currency risk of the Group's commitments for purchases of uranium (forward foreign exchange contracts, currency swaps) and to part of the interest rate swaps entered into for the purpose of hedging against the fluctuations in the interest cash flows relating to the loan contracts of the Group.

Both at the inception of a hedge and thereafter, the Group documents its estimate on whether the derivative financial instruments used in the hedge transactions are highly effective. The derivative financial instruments to which hedge accounting is applied are classified as non-current and current assets and liabilities on the basis of the maturity. The Group applies both cash flow and fair value hedge accounting.

#### Cash flow hedge

The effective portion of the changes in the fair values of derivatives designated as and qualifying for cash flow hedges is recognized in other comprehensive items in the fair value reserve under equity. The gain or loss relating to the ineffective portion is recognized in profit or loss, except when they relate to the construction of OL3 power plant and are capitalized as part of the cost of the asset. The fair value changes accumulated in equity are recognized in profit or loss in the same period when the hedged item affects profit or loss.

Gains and losses from hedges of the currency risk related to fuel purchases are transferred from equity to adjust the cost of the item of inventory in question. Gains and losses from hedges related to fuel purchases are recognized to adjust the fuel purchases under the Materials and services item in accordance with inventory recognition principles.

When a hedge no longer qualifies for hedge accounting, or the hedging instrument initially recognized as a cash flow hedge matures or is sold, the cumulative gains or losses currently included in equity are recognized in profit or loss during the lifetime of the hedging instrument in question. When an anticipated transaction is no longer expected to occur, the cumulative gain or loss included in equity is recognized in profit or loss.

When a hedge of the currency risk related to fuel purchases no longer qualifies for hedge accounting, or the hedging instrument initially recognized as a cash flow hedge matures or is sold, the cumulative gains or losses currently included in equity are recognized in inventory at the same moment as the purchase of the inventory. When an anticipated transaction is no longer expected to occur, the cumulative gain or loss included in equity is recognized in profit or loss.

### Fair value hedge

The Group applies fair value hedge accounting for hedging fixed interest rate risk on publicly traded bonds. Changes in the fair value of derivative financial instruments that qualify as fair value hedges are recognized in the income statement under financial items, along with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. The carrying amounts of hedged items and fair values of hedging instruments are included in interest-bearing liabilities and assets. If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item, for which the effective interest method is used, is recognized to profit or loss over the period to maturity.



### Derivatives that do not qualify for hedge accounting

The changes in the fair value of interest rate options, interest rate swaps and forward foreign exchange contracts that do not qualify for hedge accounting are presented under finance income and expenses, unless they relate to the construction of OL3 power plant and are capitalized as part of the cost of the asset.

## **Borrowing costs**

Borrowing costs are recognized in profit or loss in the period when they have incurred, except when they relate to the construction of a power plant or any other significant investment, of which completion time exceeds one year. In that case, borrowing costs are capitalized as part of the cost of the asset.

## Foreign currency items

Transactions and financial items denominated in a foreign currency are recognized at the rates on the day when they occur. Receivables and liabilities denominated in a foreign currency are measured in the financial statements at the ECB's official exchange rate on the closing date. Exchange gains and losses from operating activities are included in the corresponding items above operating profit or loss. Exchange differences arising from financial items are recognized in finance income and expenses.

## Equity

### Share capital

TVO has in its possession three series of shares, A, B and C. The A series entitles the shareholder to the electricity generated by the OL1 and OL2 nuclear power plant units. The B series entitles the shareholder to the electricity that will be generated by the OL3 unit. The C series entitles the shareholder to the electricity generated by the TVO share in the Meri-Pori coal-fired power plant.

Payments received from shares in connection with setting up the TVO and in the form of increases in share capital are recognized under share capital, statutory reserve and share premium reserve.

### Subordinated shareholder loans (hybrid equity)

Subordinated shareholder loans (hybrid equity) are treated as equity. Subordinated shareholder loans (hybrid equity) are initially recognized at fair value including related transaction costs. There is no maturity date for the subordinated shareholder loans (hybrid equity), but the borrower is entitled to repay the loan in one or several installments. The Board of Directors of the borrower has the right to decide not to pay interest during any current interest period. Unpaid interest does not accumulate to the following interest periods.

The interest of the subordinated shareholder loans (hybrid equity) are recognized in liabilities when the obligation to pay interest is incurred. Interest expenses are recognized in the retained earnings and are not recognized in profit or loss.

## Earnings per share

The Group does not report earnings per share, as the parent company is operating at cost price. The shares of TVO are not traded on a public market.



### **Provisions**

The Group recognizes a provision for environmental restorations, asset retirement obligations, as well as legal and other claims, when the Group has a legal or constructive obligation and it is likely that an outflow of resources will be required to settle the obligation and the amount of the obligation can be reliably estimated. The provision is measured at the present value of the expenditure expected to be required to settle the obligation. The interest rate used in the measurement of provisions is the estimated long-term borrowing rate plus the ECP's inflation target and an estimated company-specific risk premium. The increase in the provision due to the passage of time is recognized as interest expense.

The most significant provision is that for the nuclear waste management obligation under the Nuclear Energy Act. The provision covers all future expenditure arising from nuclear waste management, including the decommissioning of nuclear power plants, the disposal of spent fuel and a risk marginal.

#### Assets and provisions related to the nuclear waste management obligation

The parent company's nuclear waste management obligation which is based on the Nuclear Energy Act is covered by payments made to the Finnish State Nuclear Waste Management Fund. The obligation covers all the future expenditures for nuclear waste management, including the decommissioning of nuclear power plants, the disposal of spent fuel, and a risk marginal. The amount of payments is determined by assuming that the decommissioning would start at the beginning of the year following the assessment year. The research relating to the disposal, as well as the actual disposal of TVO's spent fuel, are carried out by Posiva Oy, which charges from TVO the costs arising from these activities, including the acquisition cost of property, plant and equipment.

In the consolidated financial statements, TVO's share of the Finnish State Nuclear Waste Management Fund is shown as non-current assets. It is accounted for in accordance with IFRIC 5 Rights to Interests Arising from Decommissioning, Restoration and Environmental Rehabilitation Funds.

The nuclear waste management obligation is shown as a provision under non-current liabilities. The fair value of the nuclear waste management provision has been determined by discounting the future cash flows which are based on plans about future activity and the estimated expenditure relating to it, taking into account actions already taken.

The present initial value of the provision for the decommissioning of a nuclear power plant (at the time of commissioning the nuclear power plant) has been capitalized as property, plant and equipment and will be adjusted later for possible changes in the plan. The amount recognized relating to decommissioning will be depreciated over the estimated operating time of the nuclear power plant.

The provision for spent fuel covers the future disposal costs of fuel used by the end of each accounting period. The costs for the disposal are expensed during the operating time of the plant, based on fuel usage. The impact of any changes to the plan will be recognized immediately in the income statement based on fuel used by the end of each accounting period.

The timing factor is taken into account by recognizing the interest expense related to discounting the nuclear waste management provision. The interest accruing on TVO's share in the Finnish State Nuclear Waste Management Fund is presented as finance income.

TVO's share in the Finnish State Nuclear Waste Management Fund is higher than the corresponding asset recognized in the balance sheet. The nuclear waste management obligation is covered by TVO's share in the Fund, as required by the Nuclear Energy Act. The obligation for nuclear waste management is not discounted. The amount of the annual payment to the Finnish State Nuclear Waste Management Fund is based on the change on the nuclear waste management obligation and funding obligation target, the share of the profit or loss of the Fund, and the changes resulting from actions taken.



#### Taxes

The Group does not recognize deferred taxes, because TVO operates at cost price. According to this principle, TVO will not pay taxes on its operations, and therefore there is no taxable income. The tax recognized by the Group consists of tax relating to non-deductible expenses. It also includes any taxes for previous financial years.

## **Employee benefits**

The pension benefits for Group personnel have been arranged with external pension insurance companies. The insurance policies relating to earnings-based pensions, as well as some voluntary pension insurance policies, have been accounted for as defined contribution plans.

Payments made to defined contribution plans as to pensions are recognized on an accrual basis in the income statement.

## Critical accounting estimates and judgements

The preparation of financial statements requires estimates and assumptions concerning the future. Estimates and assumptions have an effect on the reported amounts of assets and liabilities, and expenses and income during the accounting period. The actual results may differ from these estimates.

# The provision for future obligations for the decommissioning of the nuclear power plant and for the disposal of spent fuel

Estimates and assumptions have been used when estimating the assets, liabilities, expenses and income related to the future decommissioning of the nuclear power plant and the disposal of spent fuel. These are based on long-term cash-flow forecasts of estimated future costs.

The main assumptions relate to technical plans, time factor, cost estimates and the discount rate. The technical plans are approved by State authorities. Any changes in the assumed discount rate would change the provision. If the discount rate used were lowered, the provision would increase.

Any future increase in the provision would be offset by the recognition of an equal increase in TVO's share in the assets of the Finnish State Nuclear Waste Management Fund. According to IFRS, the carrying amount of the assets is limited to the value of the provision, as TVO does not have control in the Finnish State Nuclear Waste Management Fund (see note 24 Assets and provisions related to nuclear waste management obligation).

#### Power plant construction in progress - OL3

OL3 is a power plant unit under construction that has been ordered under a turnkey principle. According to an announcement of the OL3 turnkey supplier, the delivery will be delayed from the original schedule according to which the power plant unit should have been in production as of 30 April 2009. In compliance with the supply contract the company is entitled to compensation in case the delay is due to the supplier. Additionally, because of the delay the company has incurred and will incur direct and indirect expenses for which the company on the basis of the supply contract has claimed for compensation. In its Financial Statement the company handles liquidated damages and compensation receivables and the supplier's claims related to the plant supply as one entity. Claims between the parties will finally be settled in arbitration. Since the financial result of the arbitration procedure currently in progress cannot be reliably estimated, no receivables or liabilities, as required by IAS 37, have been booked.



No reserves have been booked for the supplier's claims and arbitration procedures. TVO has considered the Supplier's previously submitted claims being without merit. TVO will scrutinize the new material which has been submitted, and respond to it in due course.

All the realized costs on the OL3 project that meet recognition criteria have been booked as acquisition costs of property, plant and equipment on the Group balance sheet.

### Impairment testing

Impairment testing of non-current assets is performed when there are indications that the carrying amount of an asset may not be recoverable. In testing, future discounted cash flows which can be recovered by use of the asset and its possible sale are used as an indicator.

TVO operates on a cost-price principle. According to the company documents, the shareholders are obliged to pay all the expenses of the Group in electricity prices including amortization of property, plant and equipment. When assessing by means of recoverable amounts possible impairment of assets and subsequent need for recognition of impairment loss, the recoverable amounts always correspond, with some exceptions, to the carrying amount of the asset and thus, as a rule, no need for recognition of impairment loss arises.



# 3 Segment reporting

### **Segment structure in TVO Group**

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, depreciation and impairment charges, finance income and expenses, profit/loss for the year 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.

EUR 1 000	2015	2014
Turnover by segments		
Nuclear power	256 843	298 377
Coal-fired power	18 903	28 832
Total	275 746	327 209
Depreciation and impairment charges by segments		
Nuclear power	102 318	45 496
Coal-fired power	7 782	7 753
Depreciation and impairment charges (FAS)	110 100	53 249
The impact of the nuclear waste management obligation	4 515	4 467
Total (IFRS)	114 615	57 716
Finance income and expenses by segments		
Nuclear power	491	3 825
Coal-fired power	563	1 420
Finance income and expenses (FAS)	1 054	5 245
The impact of the nuclear waste management obligation	42 236	38 484
The impact of financial instruments	-27	-147
Other IFRS adjustments	-539	-224
Total (IFRS)	42 724	43 358



#### Profit/loss for the financial year by segments

Nuclear power	10 823	7 554
Coal-fired power	-3 506	-2 177
Profit/loss before appropriations (FAS)	7 317	5 377
The impact of the nuclear waste management obligation	-3 258	-6 441
The impact of financial instruments	27	148
Other IFRS adjustments	539	224
Total (IFRS)	4 625	-692
Assets by segments		
Nuclear power	6 218 056	5 840 090
Coal-fired power	34 562	39 152
Total (FAS)	6 252 618	5 879 242
The impact of the nuclear waste management obligation	1 084 129	1 046 407
The impact of financial instruments	81 771	54 212
The impact of finance leases	58 310	60 007
Other IFRS adjustments	-12 837	14 278
Total (IFRS)	7 463 991	7 054 146

#### **GROUP-WIDE DISCLOSURES**

Turnover shared to production of electricity and services		
Production of electricity	273 417	324 801
Services	2 329	2 408
Total	275 746	327 209

## Information about geographical areas

Teollisuuden Voima Oyj is company owned by Finnish industrial and power companies. TVO delivers electricity to its shareholders at cost price (so-called Mankala principle), i.e. delivers the electricity produced to its shareholders in proportion to their shareholdings in each series.

The Group assets are located in Finland except part of inventories of nuclear fuel acquisition.



## 4 Work performed for own purpose

EUR 1 000	2015	2014
Personnel expenses related to OL3	9 137	13 100
Total	9 137	13 100

### 5 Other income

EUR 1 000	2015	2014
Rental income	929	2 828
Profits from sales of property, plant and equipment and shares 1)	27 978	155
Sales of services	9 464	6 420
Other income 2)	58 579	197
Total	96 950	9 600

<sup>1)</sup> The sales profit of tangible assets and shares constitute mainly sales of shares, which reduce the shareholders' fixed costs invoiced in proportion to their ownership EUR 27,971 thousand.

### 6 Materials and services

EUR 1 000	2015	2014
Nuclear fuel	65 681	54 880
Coal	4 412	7 567
Materials and supplies	3 075	2 667
CO <sub>2</sub> emission rights	1 173	1 946
Nuclear waste management services 1)	-5 455	14 649
Increase (-) or decrease (+) in inventories	-10 897	3 559
External services	13 658	13 476
Total	71 647	98 744

<sup>&</sup>lt;sup>1)</sup> See note 24 Assets and provision related to nuclear waste management obligation.

<sup>2)</sup> Other income constitute mainly the impairment charge of property, plant and equipment invoiced from the shareholders against the OL4 shareholder loans EUR 58,238 thousand.



## 7 Personnel expenses

EUR 1 000	2015	2014
Employee benefit costs		
Wages and salaries	48 591	50 398
Pension expenses - defined contribution plans	7 973	8 503
Other compulsory personnel expenses	2 622	2 655
Total	59 186	61 556

### **Employee bonus system**

The Nomination and Remuneration Committee under the Board of Directors approves TVO's commitment and remuneration systems. All permanent and long-term temporary employees are included in the employee bonus system. Some of the personnel have deposited their bonuses in the Teollisuuden Voima Personnel Fund.

	2015	2014
Average number of personnel during financial year		
Office personnel	658	716
Manual workers	136	147
Total	794	863
Number of personnel on December 31		
Office personnel	614	672
Manual workers	135	137
Total	749	809

## 8 Depreciation and impairment charges

EUR 1 000	2015	2014
Intangible assets		
Computer software	268	401
Other intangible assets	847	856
Total	1 115	1 257
Property, plant and equipment		
Buildings and construction	8 754	9 864
Machinery and equipment	38 652	38 271
Other property, plant and equipment	3 341	3 857
Decommissioning	4 515	4 467
Impairment charges	58 238	0
Total	113 500	56 459
Total	114 615	57 716



# 9 Other expenses

EUR 1 000	2015	2014
Maintenance services	21 885	18 170
Regional maintenance and service	8 300	8 943
Research services	2 516	2 624
Other external services	27 449	28 675
Real estate tax	5 614	5 544
Rents	1 262	1 708
ICT expenses	3 451	4 171
Personnel related expenses	3 572	4 230
Corporate communication expenses	814	1 074
Other expenses	14 173	14 086
Total	89 036	89 225
Auditors' fees and not audit-related services		
Audit fees	101	98
Other services	167	103
Total	268	201



# 10 Finance income and expenses

EUR 1 000	2015	2014
Items included in the income statement		
Dividend income on available-for-sale investments	1 219	1 036
Interest income from loans and other receivables		
Nuclear waste management loan receivables from equity holders of the company	8 059	9 409
Other	565	377
Hedge accounted derivatives		
Ineffective portion of the change in fair value in cash flow hedge relationship	0	0
Ineffective portion of the change in fair value in fair value hedge relationship	2	10
Non-hedge accounted derivatives		
Change in fair value	51	340
Interest income from assets related to nuclear waste management	12 388	15 041
Finance income, total	22 284	26 214
Interest expenses and other finance expenses		
To the Finnish State Nuclear Waste Management Fund	8 059	9 409
To others	2 298	6 063
Hedge accounted derivatives		
Ineffective portion of the change in fair value in cash flow hedge relationship	3	1
Interest rate swaps, fair value hedges	-6 279	21 841
Fair value adjustment of loan attributable to interest rate risk	6 279	-21 841
Ineffective portion of the change in fair value in fair value hedge relationship	18	24
Non-hedge accounted derivatives		
Change in fair value	5	177
Realised derivative expenses, net	1	372
Interest expenses of provision related to nuclear waste management	54 624	53 525
Finance expenses, total	65 008	69 572
Total	-42 724	-43 358
Other community is its ma		
Other comprehensive items	2015	2014
Other comprehensive items related to derivative financial instruments:		
Cash flow hedges		
Changes in the fair value of which the following items have transferred	21 253	8 039
Transfers to the consolidated income statement	-84	-290
Transfers to inventories	9 122	2 739
Transfers to the nuclear power plant under construction	-7 696	-10 763
Transferred items, total	1 342	-8 314
Cash flow hedges, total	19 911	16 353
Changes in fair values of the available-for-sale investments	-23 412	1 911
Total other comprehensive items	-3 501	18 264



## 11 Income tax expense

EUR 1 000	2015	2014
Taxes based on the taxable income of the financial year	0	2
Total	0	2

TVO operates at cost price (so called Mankala principle, see note 1 General information on the Group), so TVO does not pay income tax during its operations. Taxes for the financial year consists of non-deductible expenses in taxation.

Other property,

Construction

## 12 Property, plant and equipment

Land and

Total	Decom-	in progress and	plant and	Machinery and	Buildings and construction	water	<b>2015</b> EUR 1 000
Total	missioning	advance payments		equipment		areas	
5 909 349	180 226	4 020 839	54 892	1 350 842	290 378	12 172	Acquisition cost 1 Jan
342 846	1 257	326 510	-1	13 385	1 694	1	Increase
-8 715	0	-4 801	0	-2 919	-995	0	Decrease
-58 238	0	-58 238	0	0	0	0	Impairment charges
0	0	-7 401	0	7 401	0	0	Transfer between categories
6 185 242	181 483	4 276 909	54 891	1 368 709	291 077	12 173	Acquisition cost 31 Dec
1 281 031	64 079	0	37 162	956 731	223 059	0	Accumulated depreciation and impairment charges according to plan 1 Jan
-3 820	0	0	0	-2 919	-901	0	Accumulated depreciation from deduction
55 263	4 516	0	3 341	38 652	8 754	0	Depreciation for the period
1 332 474	68 595	0	40 503	992 464	230 912	0	Accumulated depreciation and impairment charges according to plan 31 Dec
4 852 768	112 888	4 276 909	14 388	376 245	60 165	12 173	Book value 31 Dec 2015
				004.444	07.040	40.470	Dealt value 4 Jan 2045
4 628 318	116 147	4 020 839	17 730	394 111	67 319	12 172	Book value 1 Jan 2015
4 628 318	116 147	4 020 839	17 730	394 111	67 319	12 172	BOOK Value 1 Jan 2015
4 628 318	116 147	4 020 839  Construction	Other property,	394 111	67 319	Land and	BOOK Value 1 Jan 2015
	Decom-	Construction in progress and	Other property,	Machinery and	Buildings and		2014
4 628 318 Total		Construction	Other property,			Land and	
	Decom-	Construction in progress and	Other property,	Machinery and	Buildings and	Land and water	2014
Total	Decom- missioning	Construction in progress and advance payments	Other property, plant and equipment	Machinery and equipment	Buildings and construction	Land and water areas	<b>2014</b> EUR 1 000
Total 5 585 934	Decom- missioning 182 199	Construction in progress and advance payments	Other property, plant and equipment 54 323	Machinery and equipment	Buildings and construction 285 446	Land and water areas 11 979	2014 EUR 1 000 Acquisition cost 1 Jan
Total 5 585 934 336 038	Decom- missioning 182 199	Construction in progress and advance payments  3 716 176  320 971	Other property, plant and equipment 54 323	Machinery and equipment 1 335 811 12 914	Buildings and construction 285 446 1 914	Land and water areas 11 979 195	2014 EUR 1 000 Acquisition cost 1 Jan Increase
Total 5 585 934 336 038 -12 623	Decommissioning 182 199 0 -1 973	Construction in progress and advance payments  3 716 176  320 971  -7 230	Other property, plant and equipment 54 323 44 -75	Machinery and equipment 1 335 811 12 914 -3 201	Buildings and construction  285 446  1 914  -142	Land and water areas 11 979 195	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease
Total 5 585 934 336 038 -12 623 0	Decommissioning 182 199 0 -1 973 0	Construction in progress and advance payments  3 716 176  320 971  -7 230  -9 078	Other property, plant and equipment 54 323 44 -75 600	Machinery and equipment  1 335 811  12 914  -3 201  5 318	Buildings and construction  285 446  1 914  -142  3 160	Land and water areas 11 979 195 -2 0	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease Transfer between categories
Total 5 585 934 336 038 -12 623 0 5 909 349	Decommissioning  182 199  0  -1 973  0  180 226	Construction in progress and advance payments  3 716 176  320 971  -7 230  -9 078  4 020 839	Other property, plant and equipment  54 323  44  -75  600  54 892	Machinery and equipment  1 335 811  12 914  -3 201  5 318  1 350 842	Buildings and construction  285 446  1 914  -142  3 160  290 378	Land and water areas  11 979  195  -2  0  12 172	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease Transfer between categories Acquisition cost 31 Dec Accumulated depreciation and impairment
Total 5 585 934 336 038 -12 623 0 5 909 349 1 227 852	Decommissioning  182 199  0  -1 973  0  180 226  59 612	Construction in progress and advance payments  3 716 176  320 971  -7 230  -9 078  4 020 839	Other property, plant and equipment  54 323  44  -75  600  54 892	Machinery and equipment  1 335 811  12 914  -3 201  5 318  1 350 842  921 657	Buildings and construction  285 446  1 914  -142  3 160  290 378  213 205	Land and water areas 11 979 195 -2 0 12 172	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease Transfer between categories Acquisition cost 31 Dec Accumulated depreciation and impairment charges according to plan 1 Jan
Total 5 585 934 336 038 -12 623 0 5 909 349 1 227 852 -3 280	Decommissioning  182 199  0  -1 973  0  180 226  59 612	Construction in progress and advance payments  3 716 176  320 971  -7 230  -9 078  4 020 839  0	Other property, plant and equipment  54 323  44  -75  600  54 892  33 378  -73	Machinery and equipment  1 335 811  12 914  -3 201  5 318  1 350 842  921 657  -3 197	Buildings and construction  285 446  1 914  -142  3 160  290 378  213 205  -10	Land and water areas 11 979 195 -2 0 12 172 0	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease Transfer between categories Acquisition cost 31 Dec Accumulated depreciation and impairment charges according to plan 1 Jan Accumulated depreciation from deduction
Total 5 585 934 336 038 -12 623 0 5 909 349 1 227 852 -3 280 56 459	Decommissioning  182 199  0  -1 973  0  180 226  59 612  0  4 467	Construction in progress and advance payments  3 716 176  320 971  -7 230  -9 078  4 020 839  0  0  0	Other property, plant and equipment  54 323  44  -75  600  54 892  33 378  -73  3 857	Machinery and equipment  1 335 811  12 914  -3 201  5 318  1 350 842  921 657  -3 197  38 271	Buildings and construction  285 446  1 914  -142  3 160  290 378  213 205  -10  9 864	Land and water areas  11 979  195  -2  0  12 172  0  0	2014 EUR 1 000 Acquisition cost 1 Jan Increase Decrease Transfer between categories Acquisition cost 31 Dec  Accumulated depreciation and impairment charges according to plan 1 Jan Accumulated depreciation from deduction Depreciation for the period Accumulated depreciation and impairment

The costs for the new plant unit (OL3) under construction constituted EUR 4.2 billion of the advance payments in 2015 (EUR 3.9 billion in 2014).



### Property, plant and equipment included finance lease agreements:

EUR 1 000	Construction in progress
Book value 1 Jan 2015	72 597
Increase	0
Book value 31 Dec 2015	72 597
EUR 1 000	Construction in progress
Book value 1 Jan 2014	72 579
Increase	18
Book value 31 Dec 2014	72 597

The assets acquired through financial lease agreements are accumulated as costs for construction in progress so there is no accumulated depreciation.

## 13 Intangible assets

<b>2015</b> EUR 1 000	CO <sub>2</sub> emission rights	Computer software	Other intangible assets	Advance payments	Total
Acquisition cost 1 Jan	1 932	20 408	21 782	522	44 644
Increase	1 187	83	0	1 012	2 282
Decrease	-1 932	0	0	0	-1 932
Acquisition cost 31 Dec	1 187	20 491	21 782	1 534	44 994
Accumulated depreciation and impairment charges according to plan 1 Jan	0	19 346	17 405	0	36 751
Depreciation for the period	0	268	847	0	1 115
Accumulated depreciation and impairment charges according to plan 31 Dec	0	19 614	18 252	0	37 866
Book value 31 Dec 2015	1 187	877	3 530	1 534	7 128
Book value 1 Jan 2015	1 932	1 062	4 377	522	7 893



<b>2014</b> EUR 1 000	CO <sub>2</sub> emission rights	Computer software	Other intangible assets	Advance payments	Total
Acquisition cost 1 Jan	2 687	20 408	21 783	0	44 878
Increase	1 932	0	0	522	2 454
Decrease	-2 687	0	-1	0	-2 688
Acquisition cost 31 Dec	1 932	20 408	21 782	522	44 644
Accumulated depreciation and impairment charges according to plan 1 Jan	0	18 945	16 551	0	35 496
Accumulated depreciation from deduction	0	0	-1	0	-1
Depreciation for the period	0	401	855	0	1 256
Accumulated depreciation and impairment charges according to plan 31 Dec	0	19 346	17 405	0	36 751
Book value 31 Dec 2014	1 932	1 062	4 377	522	7 893
Book value 1 Jan 2014	2 687	1 463	5 232	0	9 382



Book value 1 Jan 2014

### Capitalized borrowing costs included in property, plant and equipment, and intangible assets

The borrowing costs of the power plant construction in progress, OL3 project have been capitalized. Realized financial income and expenses have been divided by committed capital. The average share of capitalized borrowing costs in 2015 was 97.9 % (96.5 % in 2014). The average interest rate on loans and derivatives on 31 December, see note 27.

2015 Capitalized interest costs during construction	Other intangible	Buildings and	Machinery and	Other property,		
EUR 1 000	assets	construction	equipment	plant and equipment	Advance payments	Tota
Acquisition cost 1 Jan	3 530	31 133	112 781	2 609	948 856	1 098 909
Increase	0	0	0	0	106 566	106 566
Decrease	0	0	0	0	-2 062	-2 062
Acquisition cost 31 Dec	3 530	31 133	112 781	2 609	1 053 360	1 203 413
Accumulated depreciation and impairment charges according to plan 1 Jan	2 835	23 120	84 072	1 923	0	111 950
Depreciation for the period	107	444	1 693	33	0	2 277
Accumulated depreciation and impairment charges according to plan 31 Dec	2 942	23 564	85 765	1 956	0	114 227
Book value 31 Dec 2015	588	7 569	27 016	653	1 053 360	1 089 186
Book value 1 Jan 2015	695	8 013	28 709	686	948 856	986 959
2014 Capitalized interest costs during construction EUR 1 000	Other intangible assets	Buildings and construction	Machinery and equipment	Other property, plant and equipment	Advance payments	Tota
Acquisition cost 1 Jan	3 530	31 133	112 781	2 609	784 574	934 627
Increase	0	0	0	0	167 510	167 510
Decrease	0	0	0	0	-3 228	-3 228
Acquisition cost 31 Dec	3 530	31 133	112 781	2 609	948 856	1 098 909
Accumulated depreciation and impairment charges according to plan 1 Jan	2 728	22 676	82 379	1 890	0	109 673
Depreciation for the period	107	444	1 693	33	0	2 277
Accumulated depreciation and impairment charges according to plan 31 Dec	2 835	23 120	84 072	1 923	0	111 950
Book value 31 Dec 2014	695	8 013	28 709	686	948 856	986 959

824 954

802

8 457

30 402

719

784 574



### 14 Investments in joint ventures

EUR 1 000	2015	2014
1 Jan	1 009	1 009
31 Dec	1 009	1 009

### Nature of investment in joint ventures 2015 and 2014:

Name of entity	Place of incorporation	share (%)	Measurement method
Posiva Oy	Eurajoki	60	Equity

TVO has a 60 per cent shareholding in Posiva Oy. Posiva is responsible for the research and implementation of final disposal of spent nuclear fuel of its shareholders TVO and Fortum Power and Heat Oy (FPH).

TVO governs Posiva Oy jointly with FPH, based on Articles of Association and Shareholders Agreement. TVO is liable for approximately 74 per cent of Posiva's expenses. The duty of Posiva is to carry out all tasks related to the final disposal of spent nuclear fuel of its shareholder's nuclear power plants in Finland in order to fulfill their nuclear waste management obligation as specified in the Nuclear Energy Act. The company's operations also include research and construction related to the final disposal solution. Management of spent fuel is carried out according to the detailed plan examined by Finnish Centre for Radiation and Nuclear Safety and approved by The Ministry of Employment and the Economy.



### Summarised financial information (FAS) for Posiva Oy

Posiva Oy is a private company and there is no quoted market price available for its shares.

In the consolidated financial statements Posiva Oy is accounted by the equity method of accounting.

Summarised balance sheet	2015	2014
Current		
Cash and cash equivalents	18 844	15 852
Other current assets (excluding cash)	4 690	6 391
Total current assets	23 534	22 243
Financial liabilities (excluding trade payables)	-436	-683
Other current liabilities (including trade payables)	-19 650	-18 425
Total current liabilities	-20 086	-19 108
Non-current		
Assets	2 935	3 463
Financial liabilities	-4 701	-4 916
Total non-current liabilities	-4 701	-4 916
Net assets	1 682	1 682
Summarised statement of comprehensive income  Turnover	62 610	66 203
Turnover	62 610	66 203
Depreciation and impairment charges	109	364
Interest income	28	31
Interest expense	-60	-71
Pre-tax profit from continuing operations	2	5
Income tax expense	-2	-5
Post-tax profit from continuing operations	0	0
Reconciliation of summarised financial information		
Operating net assets 1 Jan	1 682	1 682
Profit/loss for the period	0	0
Closing net assets	1 682	1 682
Interest in joint venture 60 %	1 009	1 009
Carrying value	1 009	1 009



# 15 Book values of financial assets and liabilities by categories

	Danisatisa	Danimatima	Danis satis sa			Financial	l		
	Derivative financial	Derivative financial				Financial liabilities			
			instruments			measured			
2015	at fair value through profit		designated		Available- for-sale	at amortized		Fair value	
EUR 1 000	or loss			receivables		cost		total	Note
Non-current assets									
Loans and other receivables				1 012 464			1 012 464	1 012 464	16
Investments in shares					1 934		1 934	1 934	17
Derivative financial instruments	58 731	25 862	25 876				110 469	110 469	20
Current assets									
Trade and other receivables				31 496			31 496	31 496	16
Derivative financial instruments	0	4 441					4 441	4 441	20
Total by category	58 731	30 304	25 876	1 043 960	1 934	0	1 160 804	1 160 804	
Non-current liabilities									
Loan from the Finnish State Nuclear Waste Management Fund						1 009 050	1 009 050	1 009 050	22
Other financial liabilities						3 123 270	3 123 270	3 173 706	22
Derivative financial instruments	19 404	17 626					37 030	37 030	20
Current liabilities									
Current financial liabilities						493 307	493 307	493 307	22
Trade payables						12 971	12 971	12 971	23
Other current liabilities						182 127	182 127	182 127	23
Derivate financial instruments	176	579					755	755	20
Total by category	19 580	18 205	0	0	0	4 820 725	4 858 510	4 908 946	



Financial Inflamental Inflam	Total by category	25 825	25 649	0	0	0	4 477 869	4 529 343	4 741 221	
Part	Derivative financial instruments	417	5 053					5 471	5 471	20
Transport   Tra	Other current liabilities						109 994	109 994	109 994	23
Financial instruments   Ins	Trade payables						8 327	8 327	8 327	23
Financial instruments   Fina	Current financial liabilities						401 752	401 752	401 752	22
Part	Current liabilities									
2014 EUR 1 000         Instruments at fair value through profit at fair value hedges at fair value hedges with through profit at fair value with through profit at fair value hedges with through profit at fair value with through profit at fair value hedges with through profit at fair value with through profit at fair value hedges with through profit at fair value with through profit at fair value hedges with through profit at fair value hedges with through profit at fair value with through profi	Derivative financial instruments	25 408	20 595					46 003	46 003	20
Trade and other receivables   Trad	Other financial liabilities						2 974 996	2 974 996	3 186 874	22
Trade and other receivables   Trade and other and an amortized anamortized and an amortized and an amortized and an amortized and	Loan from the Finnish State Nuclear Waste Management Fund						982 800	982 800	982 800	22
2014 EUR 1 000Instruments at fair value through profit 	Non-current liablities									
Trade and other receivables   Trad	Total by category	37 603	17 835	32 155	1 020 267	25 857	0	1 133 716	1 133 716	
Parity of the property of th	Derivative financial instruments	4 374	9 021					13 395	13 395	20
The state of the	Trade and other receivables				33 900			33 900	33 900	16
The street of	Current assets									
financial instruments at fair value at fair value through profit as cash flow or loss hedges receivables in the constant of th	Derivative financial instruments	33 229	8 814	32 155				74 198	74 198	20
financial financial instruments instruments instruments instruments instruments instruments of the proof of t	Investments in shares					25 857		25 857	25 857	17
financial financial financial liabilities instruments instruments instruments measured at fair value designated designated designated Loans and Available- at Book through profit as cash flow as fair value other for-sale amortized value Fair value EUR 1 000 or loss hedges hedges receivables investments cost total total	Loans and other receivables				986 367			986 367	986 367	16
financial financial financial liabilities instruments instruments instruments measured at fair value designated designated Loans and Available- at Book through profit as cash flow as fair value other for-sale amortized value Fair value	Non-current assets									
Derivative Derivative Derivative Financial		instruments at fair value through profit	instruments designated as cash flow	instruments designated as fair value	other	for-sale	measured at amortized	Book value		Note



### Fair values of long-term loans, have been estimated as follows:

The fair value of quoted bonds is based on the quoted market value as of 31 December (Level 1). The fair value of fixed rate and market-based floating rate loans is estimated using the expected future payments discounted at market interest rates (Level 2).

The carrying amounts of current financial assets and liabilities approximate their fair value, as the impact of discounting is not significant.

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

<b>2015</b> EUR 1 000	Level 1	Level 2	Level 3
Financial assets at fair value			
Derivative financial instruments at fair value through profit or loss		58 731	
Derivative financial instruments designated as cash flow hedges		30 304	
Derivative financial instruments designated as fair value hedges		25 876	
Available-for-sale investments			
Investments in listed companies	0		
Investments in other stocks and shares			0
Total	0	114 910	0
Financial liabilities at fair value			
Derivative financial instruments at fair value through profit or loss		19 580	
Derivative financial instruments designated as cash flow hedges		18 205	
Derivative financial instruments designated as fair value hedges		0	
Total	0	37 785	0

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

<b>2014</b> EUR 1 000	Level 1	Level 2	Level 3
	LOVELT	LCVCI Z	Level o
Financial assets at fair value			
Derivative financial instruments at fair value through profit or loss		37 603	
Derivative financial instruments designated as cash flow hedges		17 835	
Derivative financial instruments designated as fair value hedges		32 155	
Available-for-sale investments			
Investments in listed companies	23 811		
Investments in other stocks and shares			0
Total	23 811	87 593	0
Financial liabilities at fair value			
Derivative financial instruments at fair value through profit or loss		25 825	
Derivative financial instruments designated as cash flow hedges		25 649	
Derivative financial instruments designated as fair value hedges		0	
Total	0	51 474	0

TVO has also 31 December 2015 unquoted shares EUR 1,934 (2,046) thousand whose fair value cannot be reliably determined are measured at acquisition cost.



#### Fair value estimation

Available-for-sale investments include investments in shares and fund units. Listed shares and fund units are measured at fair value, which is the market price at closing date (Level 1). TVO has not level 3 investments (assets that are not based on observable market data).

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.

<b>2015</b> EUR 1 000	Gross amounts	Related amounts not set off	Net amount
Offsetting financial assets and liabilities			
Derivative financial assets	114 910	-27 438	87 472
Derivative financial liabilities	-37 785	27 438	-10 347
<b>2014</b> EUR 1 000	Gross amounts	Related amounts not set off	Net amount
Offsetting financial assets and liabilities			
Derivative financial assets	87 593	-31 090	56 503
Derivative financial liabilities	-51 474	31 090	-20 384

For the financial derivative assets and liabilities subject to enforceable master netting arrangements or similar arrangements above, each agreement between the Group and the counterparty allows for net settlement of the relevant financial derivative assets and liabilities when both elect to settle on a net basis. In the absence of such an election, financial assets and liabilities will be settled on a gross basis, however, each party to the master netting agreement or similar agreement will have the option to settle all such amounts on a net basis in the event of default of the other party. Per the terms of each agreement, an event of default includes failure by a party to make payment when due.

### 16 Loans and other receivables

### Loans and other receivables (non-current assets)

EUR 1 000	2015	2014
Nuclear waste management loan receivables	1 009 050	982 800
Loan receivables	3 414	3 567
Total	1 012 464	986 367

According to section 52 of the Nuclear Energy Act, TVO, in exchange for collateral payments, is entitled to receive fixed-term loans from the Finnish State Nuclear Waste Management Fund, the amount which cannot be larger than 75 per cent of the latest confirmed TVO's share in the Finnish State Nuclear Waste Management Fund. The nuclear waste management loan receivables formed by the amount loaned from the Finnish State Nuclear Waste Management Fund, has been further loaned (with the same terms and conditions) to the equity holders of the company and to Fortum Oyj.



#### Nuclear waste management loan receivables are allocated as follows:

EUR 1 000	2015	2014
EPV Energia Oy	66 126	64 405
Fortum Oyj	268 235	261 257
Karhu Voima Oy	706	688
Kemira Oyj	18 758	18 270
Oy Mankala Ab	82 115	79 979
Pohjolan Voima Oy	573 110	558 201
Total	1 009 050	982 800

In accordance with its Articles of Association, TVO delivers electricity to its shareholders at cost price (so-called Mankala principle), i.e. delivers the electricity produced or procured to its shareholders in proportion to their shareholdings in each series. Each of the shareholders of each series is liable for variable and fixed annual costs that are specified in detail in the Articles of Association.

The loan receivables constitute mainly the loan receivables of Posiva Oy EUR 2,896 (3,037) thousand.

### Trade and other receivables (current assets)

EUR 1 000	2015	2014
Trade receivables	9 959	10 043
Loan receivables	274	422
Prepayments and accrued income	13 957	13 613
Other receivables	7 306	9 822
Total	31 496	33 900

Prepayments and accrued income include prepaid interests, accrued interest income, other accrued income and other prepaid expenses.

The maximum credit loss risk of trade and other receivables corresponds to their book value. On 31 December 2015 the Group had EUR 410 (582) thousand overdue receivables of which EUR 228 (0) thousand was overdue more than six months. The overdue receivables are not expected to cause the Group credit losses or impairments.

### 17 Available for-sale investments

EUR 1 000	2015	2014
Investments in listed companies	0	23 811
Investments in other stocks and shares	1 934	2 046
Total	1 934	25 857

## 18 Cash, cash equivalents and fund units

Cash and cash equivalents consist of on-hand cash, demand deposits and other current, liquid investments. Fund units consist of fund units investments which are classified at fair value.



## 19 Inventories

EUR 1 000	2015	2014
Coal		
Replacement cost	17 190	19 853
Book value	20 410	22 369
Difference	-3 220	-2 516
Raw uranium and natural uranium		
Replacement cost	83 941	73 152
Book value	63 993	53 356
Difference	19 948	19 796
Coal	20 410	22 369
Raw uranium and natural uranium	63 993	53 356
Nuclear fuel	160 166	158 024
Materials and supplies	5 851	5 782
Total	250 420	239 531

## 20 Derivative financial instruments

Nominal values of the derivative financial instruments		M	laturity structure			
2015		<del>'''</del>	atany or actar			
EUR 1 000	< 1 year	1-3 years	3-5 years	5-7 years	> 7 years	Total
Interest rate swaps	60 000	348 446	641 955	609 117	150 000	1 809 518
Forward foreign exchange contracts and swaps	18 431	40 908	43 124	24 574	32 470	159 508
Cross-currency swaps	0	531 432	269 415	56 117	0	856 963
Total	78 431	920 787	954 493	689 808	182 470	2 825 989
Nominal values of the derivative financial instruments		M	laturity structure			
2014						
EUR 1 000	< 1 year	1-3 years	3-5 years	5-7 years	> 7 years	Total
Interest rate swaps	30 000	90 000	578 446	280 000	23 000	1 001 446
Forward foreign exchange contracts and swaps	34 896	33 668	43 498	34 357	44 798	191 216
Cross-currency swaps	73 522	214 481	375 232	211 069	56 117	930 421



#### Fair values of the derivative financial instruments

2015			
EUR 1 000	Positive	Negative	Tota
Interest rate swaps			
Cash flow hedges	0	-17 731	-17 731
Fair value hedges	25 876	0	25 876
Non-hedges	0	-176	-176
Forward foreign exchange contracts and swaps			
Cash flow hedges	30 304	-475	29 829
Cross-currency swaps			
Non-hedges	58 731	-19 404	39 327
Total	114 910	-37 785	77 125
2014			
EUR 1 000	Positive	Negative	Tota
Interest rate swaps			
Cash flow hedges	0	-21 509	-21 509
Fair value hedges	32 155	0	
			32 155
Non-hedges	0	-773	
Non-hedges  Forward foreign exchange contracts and swaps	0	-773	
	0 17 835	-773 -4 139	-773
Forward foreign exchange contracts and swaps			-775 13 698
Forward foreign exchange contracts and swaps  Cash flow hedges	17 835	-4 139	32 155 -773 13 695 69
Forward foreign exchange contracts and swaps  Cash flow hedges  Non-hedges	17 835	-4 139	-773 13 695



### 21 Equity

#### Share capital

The registered share capital of the Company according to the Articles of Association was EUR 606,193 thousand on 31 December 2015. TVO does not have a maximum or minimum limit for the share capital. The number of the shares on 31 December 2015 was 1,394,283,730. The shares are divided into the three series of shares as follows: A series 680,000,000, B series 680,000,000 and C series 34,283,730 shares. The shares have no nominal price as is stipulated in the Finnish Limited Liability Companies Act.

According to the Articles of Association, TVO delivers electricity to its shareholders at cost price, i.e. it delivers the electricity produced or procured to its shareholders in proportion to their shareholding in each series. Each of the shareholders of each series is liable for the variable and fixed annual costs that are specified in detail in the Articles of Association. The Company prepares annually a balance sheet divided into series of shares. The balance sheet, which will be presented to the Shareholders' Meeting, specifies the assets, liabilities and equity of the different series of shares.

#### Share number reconciliations:

EUR 1 000	Number of shares	Share capital	Share premium reserve and statutory reserve
1 Jan 2014	1 394 283 730	606 193	242 383
31 Dec 2014	1 394 283 730	606 193	242 383
31 Dec 2015	1 394 283 730	606 193	242 383

### The company has three registered share series: A, B and C.

Share number	31 Dec 2015	31 Dec 2014
A series	680 000 000	680 000 000
B series	680 000 000	680 000 000
C series	34 283 730	34 283 730
Total	1 394 283 730	1 394 283 730

### Share premium reserve

The share premium reserve contains the share premiums of the share issues, EUR 232,435 thousand.

#### Statutory reserve

The statutory reserve consists of EUR 9,948 thousand paid by Imatran Voima Oy, the predecessor of Fortum Power and Heat Oy, in 1979 when it became an equity holder in the company.

### Fair value and other reserves

Profits and losses incurred by fair value changes of available-for-sale investments and derivatives used as cash flow hedges are entered in this reserve. The fair changes of derivatives are transferred to the profit/loss statement, when the cash flows they have been hedging have been realized. Fair value changes in available-for-sale investments are transferred to the income statement, when the investments are relinquished or their value diminishes.



### Subordinated shareholder loans (hybrid equity)

The carrying value of the interest-bearing subordinated shareholder loans in the balance sheet 31 December 2015 was EUR 479,300 thousand. There is no maturity date for the subordinated shareholder loans (hybrid equity), but the borrower is entitled to repay the loan in one or several installments. The Board of Directors of the borrower has the right to decide not to pay interest during any current interest period. Unpaid interest does not accumulate to the following interest periods.

Subordinated shareholder loans (hybrid equity) are unsecured and in a weaker preference position than promissory notes. Holders of a subordinated shareholder loans has no shareholder rights, nor does the bond dilute the ownership of the company's shareholders.

#### **Retained earnings**

This item contains the earnings from previous financial periods and the profit/loss of the financial year.

### 22 Interest-bearing liabilities

EUR 1 000	2015	2014
Non-current interest-bearing liabilities		
Loan from the Finnish State Nuclear Waste Management Fund	1 009 050	982 800
Bonds	2 480 900	2 250 999
Bank loans	312 399	414 255
Loans from others	272 512	250 582
Finance leasing liabilities	57 459	59 160
Derivative financial instruments	37 030	46 003
Total	4 169 350	4 003 799
Current interest-bearing liabilities		
Current interest-bearing liabilities Current portion of long-term bonds	270 632	77 402
	270 632 104 583	
Current portion of long-term bonds		89 095
Current portion of long-term bonds  Current portion of bank loans	104 583	89 095 1 692
Current portion of long-term bonds  Current portion of bank loans  Current portion of finance lease liabilities  Other interest-bearing liabilities (Commercial paper program)	104 583 1 700	89 095 1 692 233 563
Current portion of long-term bonds  Current portion of bank loans  Current portion of finance lease liabilities	104 583 1 700 116 392	77 402 89 095 1 692 233 563 5 471 407 223

TVO has issued EUR-, USD-, GBP-, SEK- and NOK-denominated Private Placements amounting to EUR 1,192.9 million. The Placements in foreign currency are treated as EUR floating or fixed rate loans that are adjusted at the closing date with ECB fixing rate. The Private Placements have been swapped by using cross-currency swaps. In 2015, the effect of foreign exchange hedges was positive amounting to EUR 26.8 million and correspondingly, the effect of foreign currency denominated loans was negative amounting to EUR 26.8 million.



### Maturity period of finance lease liabilities

EUR 1 000	2015	2014
Finance lease liabilities - minimum lease payments		
No later than 1 year	1 700	1 692
Later than 1 year and no later than 5 years	6 888	6 853
Over 5 years	50 571	52 307
Total	59 159	60 852
Finance lease liabilities - current value of minimum rents		
No later than 1 year	1 700	1 692
Later than 1 year and no later than 5 years	6 888	6 853
Over 5 years	50 571	52 307
Total	59 159	60 852

The finance lease liabilities of the Group comprise the lease agreement of spare parts of the nuclear power plant.

## 23 Trade payables and other current liabilities

EUR 1 000	2015	2014
Advances received	22 241	19 425
Trade payables	12 971	8 327
Accruals and deferred income and other liabilities	182 127	109 994
Total	217 339	137 746

### Accruals and deferred income and other liabilities are allocated as follows:

Finnish State Nuclear Waste Management Fund	20 059	30 630
Accrued interests	48 612	42 798
Accrued personnel expenses	14 362	15 321
Accruals related to CO <sub>2</sub> emission rights	1 187	1 946
Others	97 907	19 299
Total	182 127	109 994



# 24 Assets and provision related to nuclear waste management obligation

### Share in the Finnish State Nuclear Waste Management Fund

Under the Nuclear Energy Act in Finland, TVO has a legal obligation to fully fund the legal liability for nuclear waste including the decommissioning of the power plant through the Finnish State Nuclear Waste Management Fund (=nuclear waste management obligation).

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 carrying value of the fund in TVO's balance sheet is calculated according to the interpretation in IFRIC 5 "Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds".

### Provision related to the nuclear waste management obligation

The provision is related to future obligations for decommissioning of the power plant, management of spent fuel and operating waste. The fair value of the provision is calculated according to IAS 37 based on discounted future cash flows which are based on estimated future expenses. The cost estimate is based on a nuclear waste management plan covering the management of spent nuclear fuel and operating waste and decommissioning of the nuclear power plant. The new total cost estimate based on a new nuclear waste management technical plan and schedule is updated every third year. The next update of total cost estimate will be in year 2016.

# At the end of the year, the balance sheet contains the following assets and liabilities concerning the nuclear waste management obligation:

EUR 1 000	2015	2014
The carrying value of TVO's share in the Finnish State Nuclear Waste Management Fund (non-current assets)	971 241	930 260
Provision related to nuclear waste management (non-current liabilities)		
Beginning of the year	930 260	897 919
Increase in provision	12 783	10 016
Used provision	-26 426	-31 200
Changes due to discounting	54 624	53 525
End of the year	971 241	930 260
The discount rate %	5,5	5,5

# 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	2015	2014
Liability for nuclear waste management according to the Nuclear Energy Act	1 369 400	1 349 100
TVO's funding target obligation 2016 (2015) to the Finnish State Nuclear Waste Management Fund	1 369 400	1 345 400
TVO's share in the Finnish State Nuclear Waste Management Fund 31.12.2015 (31.12.2014)	1 357 800	1 324 200
Difference between the liability and TVO's share of the fund 31.12.2015 (31.12.2014)	11 600	24 900

The legal liability calculated according to the Nuclear Energy Act in Finland and decided by the supervising authority (Ministry



of Employment and the Economy) is EUR 1,369.4 (1,349.1) million on 31 December 2015 (31 December 2014). The carrying value of the liability in the balance sheet calculated according to IAS 37 is EUR 971.2 (930.3) million on 31 December 2015. The main reason for the difference between the carrying value of the provision and the legal liability is the fact that the legal liability is not discounted to net present value.

TVO's share in the Finnish State Nuclear Waste Management Fund is EUR 1,357.8 (1,324.2) million on 31 December 2014. The carrying value of the TVO's share in the fund in the balance sheet is EUR 971.2 (930.3) 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 difference between the funding target and the share in the Finnish State Nuclear Waste Management Fund at the end of each year is due to the funding target being completed by paying the nuclear waste management fee only during the first quarter of the following year.

TVO has issued to the State the shareholders' guarantees as security for the unfunded legal liability. The security also covers unexpected events as determined in the Nuclear Energy Act. The guarantees are included in the nuclear waste management obligations, see note 25 Obligations and other commitments.

Finnish participants in the State Nuclear Waste Management Fund are allowed to borrow from the Fund according to defined rules. TVO utilizes the right to borrow funds back and has pledged the receivables from the shareholders as security for the loans. The loans are renewed yearly. The loans are included in the interest-bearing liabilities, see note 22 Interest-bearing liabilities.



## 25 Obligations and other commitments

# Operating leases Group as lessee

Minimum rents to be paid based on non-cancellable lease agreements:

EUR 1 000	2015	2014
No later than 1 year	282	326
Later than 1 year and no later than 5 years	94	313
Total	376	639

The rents recognized as expenses during the period are as follows:

Rents	314	324
Total	314	324

Non-cancellable lease agreements have been made for the office equipment and vehicles.

### Pledged promissory notes and financial guarantees

EUR 1 000	2015	2014
Pledged promissory notes to the Finnish State Nuclear Waste Management Fund	1 009 050	982 800
Guarantees given by shareholders related to the nuclear waste management obligation	137 620	152 710

The Company under the nuclear waste management obligation is entitled to borrow an amount equal to 75 per cent of its share in the Finnish State Nuclear Waste Management Fund. TVO has lent the funds borrowed from the fund to its shareholders and has pledged the receivables from the shareholders as collateral for the loan.

The absolute guarantees given by the equity holders of the company are given to cover the unfunded portion of the nuclear waste management obligation and unexpected events as determined in the Nuclear Energy Act.

### **Investment commitments**

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

EUR 1 000	2015	2014
OL1 and OL2	140 000	135 000
OL3	692 000	779 000
Total	832 000	914 000



### **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 July 2015, was approximately EUR 3.4 billion in total. The claim covered events that occurred during the construction period until the end of June 2011. The sum included penalty interest (calculated until July 2015) and payments delayed by TVO under the plant contract amounting to a total of approximately EUR 1.4 billion, as well as approximately EUR 140 million in alleged loss of profit. Having considered and found the earlier claims by the Supplier to be without merit, TVO will scrutinize the updated claim and respond to it in due course.

In February 2016, the Supplier updated its claim in the arbitration proceedings concerning the delay in the OL3 Project. The Supplier's monetary claim is now approximately EUR 3.52 billion in total. Changes in the arbitration proceedings after the year end are described in the note 28 Events after the balance sheet date.

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

The arbitration proceedings may continue for several years.

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

### CO<sub>2</sub> emission rights

In principle TVO has, on 31 December, emission rights at least the same amount as the actual annual emissions are. If the actual emissions exceed the amount of the emission rights that TVO possesses, TVO has booked the expense for exceeding emission rights at the market value on 31 December.

	2015	2015			
	t CO <sub>2</sub>	EUR 1 000	t CO <sub>2</sub>	EUR 1 000	
Total annual emissions from production facilities	139 484		334 839		
Possessed emission rights	148 029		335 237		
Emission rights and emission right reductions bought 1)	148 029	1 173	330 075	1 946	

TVO is responsible for the amount of emission rights corresponding to its share of the production of the plant.

<sup>1)</sup> The purchases of the emission rights and emission right reductions are included in materials and services. The emission rights that TVO possesses on 31 December are included in intangible assets on the balance sheet.



## 26 Related party

The Group's related parties include parent company Teollisuuden Voima Oyj and its subsidiary and joint venture. The related parties also include the Board of Directors and the Executive Management including the President and CEO and Deputy CEO.

### Group's parent company and subsidiaries

Company	Home country	Ownership (%)	Share in voting rights (%)
Teollisuuden Voima Oyj	Finland		
TVO Nuclear Services Oy	Finland	100	100

#### Transactions with related parties are as follows

Transactions with related parties are as follows									
<b>2015</b> EUR 1 000	Sales	Purchases	Interests	Receivables	Liabilities				
Posiva Oy (joint venture)	10 245	45 586	36	6 871	5				
<b>2014</b> EUR 1 000	Sales	Purchases	Interests	Receivables	Liabilities				
Posiva Oy (joint venture)	9 190	47 881	43	5 757	1 656				

### Teollisuuden Voima Oyj's shareholders

According to IAS 24 standard in addition the Group related parties are TVO's two biggest shareholders Pohjolan Voima Oy (PVO) and Fortum Power and Heat Oy (FPH) which have significant authority and PVO's biggest owner UPM-Kymmene Oyj (UPM) and FPH's owner Fortum Oyj.

#### Transactions with related parties are as follows

<b>2015</b> EUR 1 000	Sales	Purchases	Interests	Receivables	Liabilities
PVO, Fortum Oyj, Fortum Power and Heat Oy	277 236	8 993	10 374	856 312	428 943
2014					
EUR 1 000	Sales	Purchases	Interests	Receivables	Liabilities
PVO, Fortum Oyj, Fortum Power and Heat Oy	270 148	7 848	11 321	835 181	340 637

### Senior management's employee benefits

The senior management of TVO comprises the Board of Directors and the Executive Management including President and CEO and Deputy CEO. The Group has no business transactions with senior management.

EUR 1000	2015	2014
Wages, salaries and other short-term benefits	1 912	2 279
Total	1 912	2 279



## 27 Financial risk management

Financing and financial risks are centrally managed by the finance department of TVO in accordance with the Finance Policy approved by the Board of Directors. TVO is exposed to a variety of financial risks: liquidity-, market- and credit risk. These do not include the receivables and obligations between the Company and its owners, as the Company operates at cost price (see note 1 General information on the Group).

TVO's guiding financial principles are to ensure access to adequate liquidity reserves and, secondly, to reduce volatility in cash flows deriving form short- and medium-term fluctuations in the financial markets.

In accordance with the Finance Policy of the Company, derivative instruments are entered into only with hedging purposes and they should qualify for hedge accounting under IFRS.

### Liquidity risk

Liquidity and refinancing risk is defined as the amount by which earnings and cash flows are affected as a result of the Company not being able to secure sufficient financing. In addition to sufficient liquid assets and committed credit lines TVO aims to diminish the refinancing risk by spreading the maturity dates of its loans and different financing sources as much as possible.

In accordance with the Finance Policy of TVO, the maturities and refinancing of long-term loans are planned so that no more than 25 per cent of the outstanding loans mature during the next rolling 12-month period. The loans borrowed from the Finnish State Nuclear Waste Management Fund, which have been lent further to the shareholders, form an exception.

TVO issues commercial papers under the Commercial Paper Program for short-term funding purposes. There shall always exist committed credit lines with a minimum duration of 12 months for an amount corresponding to the funding needs of the Company for the following 12 months.

In addition to long-term committed credit lines, the Company shall maintain liquid assets at an amount stated in the Finance Policy. In accordance with the Finance Policy, bank deposits, certificates of deposits, commercial papers, municipal papers, and treasury notes as well as money market funds are accepted as investments, and they are mostly for the short-term purposes with maximum duration of 12 months.



### Undiscounted cash flows of financial liabilities

<b>2015</b> EUR 1 000	2016	2017	2018	2019	2020-	Total
Loans from financial institutions 1)	104 583	44 413	94 413	44 413	140 451	428 272
Financing costs 2)	13 348	9 822	5 204	2 366	2 925	33 666
Loan from the Finnish State Nuclear Waste Management Fund 3)					1 009 050	1 009 050
Financing costs	8 059	3 785	7 104	10 335	13 490	42 772
Bonds 4)	270 632	214 481	228 519	558 267	1 467 956	2 739 854
Financing costs	82 495	65 094	60 897	58 695	166 686	433 866
Loans from others 4)			88 446	0	135 231	223 677
Financing costs	3 724	3 653	3 627	2 246	3 976	17 225
Finance lease liabilities	1 700	1 709	1 718	1 726	52 306	59 159
Commercial papers	116 392					116 392
Other liabilities	126 427					126 427
Interest rate derivatives	9 967	9 868	9 568	4 255	6 809	40 467
Total	737 327	352 823	499 496	682 302	2 998 879	5 270 827
EUR 1 000	2016	2017	2018	2019	2020-	Total
Forward foreign exchange contracts	368	42	39	17	12	478

<sup>1)</sup> Repayments in 2016 are included in current liabilities in the balance sheet.

On December 31, 2015, TVO had undrawn credit facilities amounting to EUR 1,500 million (2014: 1,500 million). In addition, the Group has subordinated shareholder loan (hybrid equity) commitments totaling EUR 300 million. In addition, TVO had cash equivalents amounting EUR 219 million.

<sup>&</sup>lt;sup>2)</sup> In addition to interest costs, financing costs include commitment fees.

<sup>&</sup>lt;sup>3)</sup> The loan is renewed yearly and connected interest payments are calculated for five years.

<sup>&</sup>lt;sup>4)</sup> The placements in foreign currency have been swapped into EUR-floating or fixed cash flow using cross-currency swaps.



#### Undiscounted cash flows of financial liabilities

<b>2014</b> EUR 1 000	2015	2016	2017	2018	2019-	Total
Loans from financial institutions 1)	89 095	104 583	44 413	94 413	184 864	517 367
Loans nom infancial institutions 1)	89 093	104 363	44 4 13	94 413		
Financing costs 2)	16 357	13 812	10 273	5 592	6 215	52 249
Loan from the Finnish State Nuclear Waste Management Fund 3)					982 800	982 800
Financing costs	9 430	2 893	4 347	6 126	7 971	30 767
Bonds 4)	73 522	270 632	214 481	228 519	1 526 221	2 313 376
Financing costs	74 116	73 072	55 682	51 326	152 177	406 373
Loans from others 4)				88 446	135 231	223 677
Financing costs	4 223	4 126	4 135	4 107	7 044	23 636
Finance lease liabilities	1 692	6 853			52 306	60 851
Commercial papers	234 000					234 000
Other liabilities	44 893					44 893
Interest rate derivatives	8 195	6 684	6 081	5 820	1 651	28 431
Total	555 523	482 655	339 412	484 349	3 056 479	4 918 418
EUR 1 000	2015	2016	2017	2018	2019-	Total
Forward foreign exchange contracts	4 299	0	0	0	309	4 608

<sup>1)</sup> Repayments in 2015 are included in current liabilities in the balance sheet.

#### Market risk

#### **Currency risk**

TVO is exposed to currency risk mainly in connection with its fuel purchases. The currency of purchases of raw uranium, enrichment and coal is frequently USD. Hedging of a currency denominated purchase is commenced when an agreement is entered into and the forecasted currency risk becomes highly probable. Both short-term and long-term loans are withdrawn mainly in euros. The loans denominated in other currencies than euros are hedged latest at the withdrawal date.

Currency swaps, forward contracts, and options can be used to hedge the currency exposure.

### Interest rate risk

Interest-bearing liabilities expose the Company to interest rate risk. The objective of the Company's interest rate risk management is to maintain the interest costs at as low level as possible and to diminish the volatility of interest costs. In accordance with the Finance Policy, the duration of the loan portfolio of the Company can vary between 30 and 42 months. At the closing date the duration was 31 months.

The average interest rate duration is managed with fixed interest rate loans, interest rate swaps, forward rate agreements as well as with interest rate caps and floors.

The average interest rate on loans and derivatives on 31 December 2015 was 2.66 % (2014: 2.72 %).

Borrowings issued at variable rates expose TVO to cash flow interest rate risk. Borrowings issued at fixed rates expose TVO

<sup>&</sup>lt;sup>2)</sup> In addition to interest costs financing costs include commitment fees.

<sup>&</sup>lt;sup>3)</sup> The loan is renewed yearly and connected interest payments are calculated for five years.

<sup>4)</sup> The placements in foreign currency have been swapped into EUR-floating or fixed cash flow using cross-currency swaps.



to fair value interest rate risk. TVO shall apply hedge accounting as far as practical. Based on the various scenarios, TVO manages its cash flow interest rate risk by using floating-to-fixed interest rate swaps. Such interest rate swaps have the econimic effect of converting borrowings from floating rates to fixed rates. TVO also enters into fixed-to-floating interest rate swaps to hedge the fair value interest rate risk.

### Expected cash flows from financial instruments under cash flow hedge accounting

<b>2015</b> EUR 1 000	2016	2017	2018	2019	2020-	Total
Interest rate swaps						
Cash flows	-9 614	-9 868	-9 568	-4 255	-6 809	-40 113
<b>2014</b> EUR 1 000	2015	2016	2017	2018	2019-	Total
Interest rate swaps						
Cash flows	-7 534	-6 352	-6 081	-5 820	-1 651	-27 439

#### Sensitivity to market risks

Sensitivity to market risks arising from financial instruments as required by IFRS 7.

	2015		2014	
EUR 1 000	Income statement	Equity	Income statement	Equity
+ 10% change in EUR/USD exchange rate	0	-15 029	0	-18 513
- 10% change in EUR/USD exchange rate	0	15 029	0	18 513
1% upward parallel shift in interest rates	-1 180	48 073	-4 464	19 272
1% downward parallel shift in interest rates	1 430	-19 523	4 864	-7 630

#### Assumptions:

The change in EUR/USD exchange rate is assumed to be +/- 10 per cent.

The USD-denominated position includes the forward foreign exchange contracts which are designated as cash flow hedges and recognized in equity and the forward foreign exchange contracts not qualified as cash flow hedges, affecting the income statement.

The variation in interest rates is assumed to be 1 percentage point parallel shift in the interest rate curve.

The interest rate risk position includes the floating rate loan receivables, interest-bearing borrowing, the interest rate derivatives and cash equivalents.

The income statement is affected by the interest-bearing loan receivables, floating rate borrowings and the interest rate derivatives, excluding those interest rate derivatives that are designated as and qualifying for cash hedges, which are recognized in equity. The gain or loss is recognized in profit or loss, except when they relate to the construction of OL3 and are capitalized in the balance sheet.



Bonds
Euro Medium Term Note Programme EUR 4.000.000.000

EUR 1 000	2015		2014			
Currency	Nominal amount	Carrying amount	Nominal amount	Carrying amount	Interest rate %	Maturity date
EUR	270 632	270 632	270 632	270 632	6,00	27 June 2016
EUR	500 000	500 000	500 000	500 000	4,625	4 Feb 2019
EUR	500 000	500 000	500 000	500 000	2,50	17 March 2021
EUR	30 000	30 000	30 000	30 000	3,88	9 May 2022
EUR	100 000	100 000	100 000	100 000	Euribor 6M+1,58	12 Sep 2022
EUR	23 000	23 000	23 000	23 000	4,08	1 Dec 2022
EUR	20 000	20 000	20 000	20 000	2,80	8 May 2024
EUR	75 000	75 000	75 000	75 000	3,60	14 Dec 2027
EUR	23 000	23 000	23 000	23 000	3,50	3 May 2030
EUR	45 000	45 000	45 000	45 000	3,90	31 March 2032
EUR	20 000	20 000	20 000	20 000	3,875	8 Nov 2032
EUR	500 000	500 000	0	0	2,201	4 Feb 2025
NOK	550 000	63 218	550 000	63 218	6,20	22 Feb 17
SEK	0	0	100 000	9 794	Stibor 3M+1,25	20 Jan 2015
SEK	0	0	30 000	2 938	4,00	20 Jan 2015
SEK	0	0	210 000	20 751	4,00	12 Feb 2015
SEK	0	0	240 000	24 742	4,00	12 Feb 2015
SEK	0	0	147 000	15 297	3,65	23 June 2015
SEK	650 000	63 601	650 000	63 601	5,30	28 March 2017
SEK	300 000	33 899	300 000	33 899	5,30	28 March 2017
SEK	500 000	53 763	500 000	53 763	4,50	8 Nov 2017
SEK	875 000	99 977	875 000	99 977	3,875	13 Sep 2018
SEK	1 125 000	128 542	1 125 000	128 542	Stibor 3M+1,40	13 Sep 2018
SEK	600 000	58 267	600 000	58 267	5,30	30 Oct 2019
SEK	650 000	70 945	650 000	70 945	Stibor 3M+1,09	17 March 2020
SEK	550 000	61 009	550 000	61 009	2,84	19 May 2020
Total		2 739 854		2 313 376		

#### **Credit risk**

Credit risk arises from the potential failure of a counterparty to meet its contractual payment obligations. Commercial trade receivables as well as receivables from financial institutions relating to investments, deposits and derivative transactions expose the Company to credit risk. In addition to money market funds, financial institutions that meet the credit rating requirements of the Group's Financial Policy are accepted as counterparties. Furthermore TVO has in place a master agreement (ISDA) with all derivative contract counterparties.

### Fuel price risk

The main fuels used for electricity production by the Group are uranium and coal.

TVO purchases the uranium fuel from the global markets. The purchasing process consists of four stages: purchase of uranium concentrate, conversion, enrichment and fuel fabrication. Purchasing Policy is used to guarantee the availability of fuel and to minimise price risk. This includes storage strategy and diversified long-term purchasing agreements with different suppliers.



TVO has not used commodity derivatives to hedge fuel price risk.

### Capital risk management

TVO's objective is to secure sufficient equity and equity-like funding that guarantees diversified funding sources.

The equity ratio of the Company varies along investment cycles. The Group targets to have a minimum equity ratio (IFRS) of 25 per cent in the long-term. When calculating the equity ratio, the loan from the Finnish State Nuclear Waste Management Fund (lent further to the shareholders) and the provision related to nuclear waste management obligation are excluded. Additionally, subordinated loans or equivalent loans from the shareholders are regarded as equity.

According to the terms of some loan agreements, the Company is obliged to offer a repayment of the loan if TVO's equity ratio (IFRS) falls below 25 per cent. There are no other key ratio-related covenants in the loan contracts.

The equity ratio monitored by TVO's management	2015	2014
Equity ratio, % (IFRS, Group) 1)	29,4	30,6
Equity ratio, % (Parent company) 2)	28,9	30,0
equity + loans from equity holders of the company		

		equity - locatio from equity floiders of the company		
1) Equity ratio %	= 100 x	balance sheet total - provision related to nuclear waste management - loan from the Finnish State Nuclear Waste Management Fund		
2) Facility and a 9/	= 100 x	equity + appropriations + loans from equity holders of the company		
<sup>2)</sup> Equity ratio %	- 100 X	balance sheet total - Ioan from the Finnish State Nuclear Waste Management Fund		

### 28 Events after the balance sheet date

On February 2, 2016, TVO signed a new revolving credit 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 and will serve as the core relationship facility for the future.

In the International Chamber of Commerce (ICC) arbitration proceedings concerning the delay in the OL3 Project, the Supplier updated its monetary claim in February 2016. The Supplier's monetary claim is now 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.

In February 2016, Japan Credit Rating Agency (JCR) decided to keep TVO's credit rating unchanged at AA-. TVO's outlook JCR estimated to be stable.



# Parent company's financial statements

# Parent company's income statement

EUR 1 000	Note	1 Jan-31 Dec 2015	1 Jan-31 Dec 2014
Turnover	2	273 418	324 801
Work performed for own purpose	3	9 131	13 004
Other income	4	98 868	11 470
Materials and services	5	-115 199	-135 149
Personnel expenses	6	-58 939	-61 180
Depreciation and impairment charges	7	-110 100	-53 249
Other expenses	8	-89 197	-89 557
Operating profit/loss		7 982	10 140
Financial income and expenses	9	-1 053	-5 246
Profit/loss before extraordinary items		6 929	4 894
Extraordinary items +/-	10	388	483
Profit/loss before appropriations and taxes		7 317	5 377
Appropriations	11	-7 317	-5 377
Profit/loss for the financial year		0	0



# Parent company's balance sheet

EUR 1 000	Note		31 Dec 2015	31 Dec 2014
Assets				
Non-current assets				
Intangible assets	12		7 141	7 925
Tangible assets	12		4 707 558	4 474 637
Investments				
Holdings in group companies	13	8		8
Holdings in joint ventures	13	1 009		1 009
Other investments	13	1 016 892	1 017 909	990 925 991 942
Total non-current assets			5 732 608	5 474 504
Current assets				
Inventories	14		250 420	239 531
Long-term receivables	15		13	25
Current receivables	16		50 394	52 604
Money market instruments			100 000	0
Cash and cash equivalents			119 023	111 915
Total current assets			519 850	404 075
Total assets			6 252 458	5 878 579
Equity and liabilities				
Equity				
Share capital	17		606 193	606 193
Share premium reserve	17		232 435	232 435
Statutory reserve	17		9 948	9 948
Retained earnings (loss)	17		9 360	9 360
Profit (loss) for the financial year	17		0	0
Total equity			857 936	857 936
Appropriations			179 831	172 515
Liabilities				
Non-current liabilities	18,19		3 016 588	2 891 802
Shareholders' loans	18		479 300	439 300
Loan from the Finnish State Nuclear Waste Management Fund	18		1 009 050	982 800
Current liabilities	20		709 753	534 226
Total liabilities			5 214 691	4 848 128
Total equity and liabilities			6 252 458	5 878 579

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# Parent company's cash flow statement

EUR 1 000	2015	2014
Operating activities		
Operating profit/loss	7 982	10 140
Adjustments to operating profit /loss 1)	82 122	53 093
Changes in working capital 2)	-12 875	-43 563
Interest paid and other financial expenses	-11 084	-17 452
Dividends received	1 219	1 036
Interest received	10 001	7 419
Cash flow from operating activities	77 365	10 673
Investing activities		
Acquisition of shares	-135	-33
Acquisition of non-current assets	-259 373	-342 346
Proceeds from sale of other investments	28 248	280
Proceeds from sale of intangible and tangible assets	6	7
Loan receivables granted	-26 234	-51 209
Repayments of loans granted	274	422
Cash flow from investing activities	-257 214	-392 879
Financing activities		
Withdrawals of long-term loans	626 250	852 830
Repayment of long-term loans	-222 617	-579 952
Investments in fund units	-100 000	0
Increase (-) or decrease (+) in interest-bearing receivables	12	20
Increase (+) or decrease (-) in short-term interest-bearing liabilities	-117 171	78 848
Group contribution received	483	233
Cash flow from financing activities	186 957	351 979
Change in cash and cash equivalents	7 108	-30 227
Cash and cash equivalents 1 Jan	111 915	142 142
Cash and cash equivalents 31 Dec	119 023	111 915
Adjustments to operating profit/loss		
Depreciation and write-downs	110 100	53 249
Gain (-) or loss (+) from divestment of non-current assets	-27 978	-156
Total	82 122	53 093
2) Changes in working capital		
Increase (-) or decrease (+) in inventories	-10 889	3 560
Increase (-) or decrease (+) in non-interest-bearing receivables	215	-5 785
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	-2 201	-41 338
Total	-12 875	-43 563



### Notes to the parent company's financial statements

### 1 Accounting principles

### Valuation principles

### Non-current assets and their depreciation

Non-current assets have been capitalized at direct acquisition cost including interest costs over the period of construction less planned depreciation and received allowances. Depreciation according to plan is calculated on a straight-line basis according to the estimated useful economic lives.

The depreciation periods are as follows:

OL1 and OL2 nuclear power plant units:

TVO's share in the Olkiluoto gas turbine power plant

- Basic investment	61 years
- Investments made according to the modernization program $% \left( \mathbf{r}_{1}\right) =\mathbf{r}_{1}$	21 - 35 years
- Automation investments associated with the modernization	15 years
- Additional investments	10 years
Buildings and structures	10 - 40 years
TVO's share in the Meri-Pori coal-fired power plant:	
- Basic investment	25 years
- Additional investments	10 years
Wind power plant	10 years

#### Valuation of inventories

Materials and supplies have been valued at direct acquisition cost, coal on the basis of the FIFO principle (first in, first out), nuclear fuel according to calculated fuel consumption, and supply stocks at average acquisition cost. If the replacement value of inventories on 31 December is lower than the original acquisition cost, the difference will not be entered in the books as an expense because the company operates at cost price.

30 years

### CO<sub>2</sub> emission rights

Carbon dioxide (CO<sub>2</sub>) emission rights are included in the intangible assets. Emission rights are recognized at historical cost. The current liability for returning emission rights is recognized at the carrying value of possessed emission rights. If there is a shortfall, a current liability is recognized to cover the acquisition of the missing emission rights. This current liability is valued at the current market value of the emission rights at the balance sheet date. The cost of the emission rights is recognized in the income statement under costs of materials and services. The gains from the sales of emission rights are refunded to the equity holders of the company.

### Research and development costs

Research and development costs associated with production activity are entered as annual costs for the year in which they were incurred.



### Items denominated in foreign currency

Transactions in foreign currency have been entered at the relevant exchange rate or at the transaction rate for purchase and sale of foreign currency. On the balance sheet date exchange rate differences on foreign currency accounts have been entered in the income statement under financial income and expenses.

#### Money market instruments

Money market instruments comprise shares in short-term money market funds and certificate of deposits. They are valued in the balance sheet at their original acquisition cost and are included in financing activities in the cash flow statements.

#### **Derivative financial instruments**

Derivative financial instruments have not been entered on the balance sheet. Their nominal values and fair values are presented in the notes to the financial statements.

Interest rate duration of floating rate loans has been managed with interest rate swaps, caps and floors. Interest costs of these instruments have been entered on accrual basis and shown in net amount under financial income and expenses. The premiums on interest rate options have been accrued over the period to maturity.

Payments of foreign currency denominated inventory acquisitions have been hedged with currency derivatives. The realized exchange rate differences of derivative financial instruments have been entered to adjust the acquisition cost of inventories. Cross currency swaps have been used to hedge foreign currency denominated long term loans.

### Items related to nuclear waste management liability

Nuclear waste management obligation is provided for in the Nuclear Energy Act. The obligation covers all future costs from nuclear waste handling including decommissioning of nuclear power plant units, costs for final disposal of spent nuclear fuel and the risk margin, decommissioning being assumed to start at the end of the year in question.

The Ministry of Employment and the Economy confirms annually at the end of the calendar year the liability for nuclear waste management for the current year and the target reserve for the next year.

The company liable for nuclear waste management shall pay its contribution to the Finnish State Nuclear Waste Management Fund so that the company's share in the Fund on 31 March is equal to the company funding obligation target confirmed for the calendar year in question.

The annual contribution to the Finnish State Nuclear Waste Management Fund and costs from nuclear waste management and services are entered as annual expenses. The nuclear waste management fee is based on the company's proposal. If the nuclear waste management fee set by the Finnish State Nuclear Waste Management Fund differs from the amount proposed by the company, the difference is entered in the accounts for the following financial year.

Nuclear waste management liability and the TVO's funding target obligation to the Finnish State Nuclear Waste Management Fund are presented in the notes to the financial statements.

The company must supply the Ministry with guarantees to cover for the difference between the legal nuclear waste management liability and the company's share in the Finnish State Nuclear Waste Management Fund as well as for unforeseen expenses in nuclear waste management. Guarantees are presented in the notes to the financial statements.

A company, liable for nuclear waste management, or its shareholder, is entitled to a loan from the Finnish State Nuclear



Waste Management Fund corresponding to 75 per cent of the company's share in the Fund. TVO uses the right to borrow back and loans the funds borrowed from the Fund further to its shareholders.

## 2 Turnover

EUR 1 000	2015	2014
Olkiluoto 1 and Olkiluoto 2	254 514	295 969
Meri-Pori	18 904	28 832
Total	273 418	324 801
Electricity delivered to equity holders of the company (GWh)  Olkiluoto 1	7 387	7 254
Olkiluoto 1	7 387	7 254
Olkiluoto 2	6 851	7 486
Total Olkiluoto 1)	14 238	14 740
Meri-Pori	167	400
Total	14 405	15 140

<sup>1)</sup> Includes wind energy 1.4 (0.7 in 2014) GWh and energy produced by gas turbine 0.3 (0.3) GWh.

# 3 Work performed for own purpose

EUR 1 000	2015	2014
Personnel expenses related to OL3	9 131	13 004

## 4 Other income

EUR 1 000	2015	2014
Rental income	929	2 828
Sales profit of tangible assets and shares 1)	27 978	155
Sales of services	11 382	8 290
Other income 2)	58 579	197
Total	98 868	11 470

<sup>1)</sup> The sales profit of tangible assets and shares constitute mainly sales of shares, which reduce the shareholders' fixed costs invoiced in proportion to their ownership EUR 27,971 thousand.

<sup>2)</sup> Other income constitute mainly the impairment charge of property, plant and equipment invoiced from the shareholders against the OL4 shareholder loans EUR 58,238 thousand.



## 5 Materials and services

EUR 1 000	2015	2014
Purchases, accrual basis		
Nuclear fuel	65 681	54 880
Coal	4 412	7 567
Materials and supplies	3 075	2 667
Increase (-) or decrease (+) in inventories	-10 897	3 560
Total	62 272	68 674
CO <sub>2</sub> emission rights	1 173	1 946
Nuclear waste management		
Contribution to the Finnish State Nuclear Waste Management Fund 1)	11 612	19 959
Nuclear waste management services	26 426	31 201
Total	38 038	51 160
External services	13 716	13 369
Total	115 199	135 149
1) Based on TVO's proposal. If the contribution confirmed by the Finnish State Nuclear Waste Management	t Fund for the year differs from the proposal, the difference will be booked	in the following financial year.
Consumption		
Nuclear fuel	52 903	51 422

Nuclear fuel	52 903	51 422
Coal	6 371	14 306
Materials and supplies	2 999	2 946
Total	62 272	68 674



# 6 Notes concerning personnel and members of administrative bodies

	2015	2014	
Average number of personnel			
Office personnel	655	711	
Manual workers	136	147	
Total	791	858	
Number of employees 31 Dec			
Office personnel	613	668	
Manual workers	135	137	
Total	748	805	
EUR 1 000	2015	2014	
Personnel expenses			
Wages and salaries	48 378	50 075	
Pension expenses	7 945	8 459	
Other compulsory personnel expenses	2 617	2 646	
Total	58 939	61 180	
Salaries and fees paid to management			
President and CEO deputy and members of the Board of Directors	835	968	

# 7 Depreciation and impairment charges

EUR 1 000	2015	2014
Depreciation according to plan		
Other capitalised long-term expenses	1 134	1 293
Buildings and construction	8 754	9 864
Machinery and equipment	38 652	38 271
Other tangible assets	3 322	3 821
Impairment charges	58 238	0
Total	110 100	53 249



# 8 Other expenses

EUR 1 000	2015	2014
Maintenance services	21 885	18 170
Regional maintenance and service	8 301	8 943
Research services	2 516	2 624
Other external services	27 667	29 091
Real estate tax	5 614	5 543
Rents	1 262	1 708
ICT expenses	3 448	4 168
Personnel related expenses	3 565	4 214
Corporate communication expenses	788	1 055
Other expenses	14 150	14 041
Total	89 197	89 557
Auditors' fees and not audit-related services		
Audit fees	99	96
Other services	167	100
Total	266	196



# 9 Financial income and expenses

EUR 1 000	2015	2014
Dividend income		
From others	1 219	1 036
Total	1 219	1 036
Interest income on long-term investments		
From joint ventures	36	43
From others	8 059	9 409
Total	8 095	9 452
Other interest and financial income		
From others	528	332
Total	528	332
Interest income on long-term investments and other interest and financial income, total	8 623	9 784
Interest expenses and other financial expenses		
To the Finnish State Nuclear Waste Management Fund	8 059	9 409
To others	113 125	179 030
Capitalised interest costs	-110 288	-172 373
Total	10 895	16 066
Total financial income (+) and expenses (-)	-1 053	-5 246
Financial income and expenses include exchange rate gains (+) and losses (-) (net)	292	21

# 10 Extraordinary items

EUR 1 000	2015	2014
Extraordinary income/Group contribution	388	483
Total	388	483

# 11 Appropriations

EUR 1 000	2015	2014
The difference between depreciation according to plan and tax depreciation, increase (-) or decrease (+)	-7 317	-5 377



## 12 Non-current assets

EUR 1 000		Formation expenses	Intangible rights	Other capitalised long-term expenses	Advance payments	Total
Intangible assets						
Acquisition cost 1 Jan 2015		57 961	1 932	42 970	522	103 385
Increase		0	1 187	83	1 012	2 282
Decrease		0	-1 932	0	0	-1 932
Acquisition cost 31 Dec 2015		57 961	1 187	43 053	1 534	103 735
Accumulated depreciation according to plan 1 Jan		57 961	0	37 499	0	95 460
Depreciation according to plan		0	0	1 134	0	1 134
Book value 31 Dec 2015		0	1 187	4 420	1 534	7 141
Accumulated depreciation difference 1 Jan		0	0	4 245	0	4 245
Change in depreciation difference		0	0	-824	0	-824
Accumulated depreciation difference 31 Dec		0	0	3 421	0	3 421
Undepreciated acquisition cost in taxation 31 Dec 2015		0	1 187	1 000	1 534	3 720
EUR 1 000	Land and water areas	Buildings and construction	Machinery and equipment	Other tangible assets	Construction in progress and advance payments	Total
Tangible assets						
Acquisition cost 1 Jan 2015	12 172	287 854	1 350 841	54 114	3 985 861	5 690 842
Increase	1	1 616	13 385	-1	326 885	341 886
Decrease	0	-901	-2 919	0	0	-3 820
Impairment charges	0	0	0	0	-58 238	-58 238
Transfer between categories	0	0	7 401	0	-7 401	0
Acquisition cost 31 Dec 2015	12 173	288 569	1 368 708	54 113	4 247 107	5 970 670
Accumulated depreciation according to plan 1 Jan	0	223 059	956 730	36 415	0	1 216 204
Accumulated depreciation from deduction	0	-901	-2 919	0	0	-3 820
Depreciation according to plan and write-downs	0	8 754	38 652	3 322	0	50 728
Book value 31 Dec 2015	12 173	57 657	376 245	14 376	4 247 107	4 707 558
Accumulated depreciation difference 1 Jan	0	-2 063	168 739	1 594	0	168 270
Change in depreciation difference	0	-3 201	10 849	494	0	8 141
Accumulated depreciation difference 31 Dec	0	-5 264	179 588	2 088	0	176 411
Undepreciated acquisition cost in taxation 31 Dec 2015	12 173	62 921	196 657	12 288	4 247 107	4 531 147
Share of machinery and equipment from book value 31 Dec 2015			359 605			
Share of machinery and equipment from book value 31 Dec 2014			377 103			



#### Capitalised borrowing costs included in non-current assets

EUR 1 000	Formation expenses	Other capitalised long-term expenses	Buildings and construction	Machinery and equipment	Other tangible assets	Construction in progress	Total
Interest during construction period							
Acquisition cost 1 Jan 2015	11 601	3 530	31 133	112 781	2 609	971 703	1 133 357
Increase	0	0	0	0	0	109 942	109 942
Write-downs	0	0	0	0	0	-1 473	-1 473
Acquisition cost 31 Dec 2015	11 601	3 530	31 133	112 781	2 609	1 080 172	1 241 826
Accumulated depreciation according to plan 1 Jan	11 601	2 835	23 119	84 071	1 923	0	123 550
Depreciation according to plan	0	107	444	1 693	33	0	2 277
Book value 31 Dec 2015	0	588	7 569	27 017	652	1 080 172	1 115 999
Accumulated depreciation difference 1 Jan	0	695	8 013	28 710	686	0	38 103
Change in depreciation difference	0	-107	-444	-1 693	-33	0	-2 277
Accumulated depreciation difference 31 Dec	0	588	7 569	27 017	652	0	35 827
Undepreciated acquisition cost in taxation 31 Dec 2015	0	0	0	0	0	1 080 172	1 080 172

## 13 Investments

EUR 1 000	Holdings in group companies	Holdings in joint ventures	Other stocks and shares	Loan receivables, joint ventures	Loan receivables, others	Total
Acquisition cost 1 Jan 2015	8	1 009	4 583	3 037	983 305	991 942
Increase	0	0	135	133	26 250	26 518
Decrease	0	0	-276	-274	0	-550
Acquisition cost 31 Dec 2015	8	1 009	4 441	2 896	1 009 555	1 017 909
Book value 31 Dec 2015	8	1 009	4 441	2 896	1 009 555	1 017 909
I can from the Finnish State Nuclear Waste Ma	nagement Fund					
Loan from the Finnish State Nuclear Waste Malent further to the equity holders of the compa					1 009 050	1 009 050
lent further to the equity holders of the compa	ny				1 009 050	1 009 050
					1 009 050	1 009 050
lent further to the equity holders of the compa	ny				1 009 050	1 009 050
lent further to the equity holders of the compared Group companies	Group share %				1 009 050	1 009 050



## 14 Inventories

2015	2014
17 190	19 853
20 410	22 369
-3 220	-2 516
83 941	73 152
63 993	53 356
19 948	19 796
20 410	22 369
63 993	53 356
160 166	158 024
5 851	5 782
250 420	239 531
	17 190 20 410 -3 220  83 941 63 993 19 948  20 410 63 993 160 166 5 851

# 15 Long-term receivables

EUR 1 000	2015	2014
Loan receivables from others	13	25
Total	13	25



# 16 Current receivables

EUR 1 000	2015	2014
Receivables from group companies		
Accrued income	1 550	1 483
Total	1 550	1 483
Receivables from joint ventures		
Interest receivables	0	1
Loan receivables	274	422
Prepayments and accrued income	3 701	2 297
Total	3 975	2 720
Receivables from others		
Trade receivables	9 632	9 401
Other receivables	7 304	9 818
Total	16 936	19 219
Prepayments and accrued income		
Prepaid interests	17 854	17 871
Accrued interest income	8 059	9 793
Other accrued income	1 968	1 508
Other prepaid expenses	52	10
Total	27 933	29 182
Total	50 394	52 604

# 17 Equity

EUR 1 000	2015	2014
Share capital 1 Jan 2015	606 193	606 193
Share capital 31 Dec 2015	606 193	606 193
Share premium reserve 1 Jan 2015	232 435	232 435
Share premium reserve 31 Dec 2015	232 435	232 435
Statutory reserve 1 Jan 2015	9 948	9 948
Statutory reserve 31 Dec 2015	9 948	9 948
Retained earnings/loss 31 Dec 2015	9 360	9 360
Profit/loss for the financial year	0	0
Total	857 936	857 936



## 18 Non-current liabilities

EUR 1 000	2015	2014
Bonds	2 469 221	2 239 853
Bank loans	318 889	423 472
Other loans	228 477	228 477
Shareholders' loans 1)	479 300	439 300
Loan from the Finnish State Nuclear Waste Management Fund 2)	1 009 050	982 800
Total	4 504 938	4 313 902

<sup>1)</sup> Subordinated loans.

#### BONDS

#### Euro Medium Term Note Programme EUR 4.000.000.000

Currency	Capital	Maturity date	EUR 1 000 2015	EUR 1 000 2014
EUR	270 632	27 Jun 2016 1)	270 632	270 632
EUR	500 000	4 Feb 2019	500 000	500 000
EUR	500 000	17 Mar 2021	500 000	500 000
EUR	30 000	9 May 2022	30 000	30 000
EUR	100 000	12 Sep 2022	100 000	100 000
EUR	23 000	1 Dec 2022	23 000	23 000
EUR	75 000	14 Dec 2027	75 000	75 000
EUR	20 000	8 Nov 2032	20 000	20 000
EUR	23 000	3 May 2030	23 000	23 000
EUR	20 000	8 May 2024	20 000	20 000
EUR	45 000	31 Mar 2032	45 000	45 000
NOK	550 000	22 Feb 2017	63 218	63 218
SEK	100 000	20 Jan 2015 1)	0	9 794
SEK	30 000	20 Jan 2015 1)	0	2 938
SEK	210 000	12 Feb 2015 1)	0	20 751
SEK	240 000	12 Feb 2015 1)	0	24 742
SEK	147 000	23 Jun 2015 1)	0	15 297
SEK	650 000	28 Mar 2017	63 601	63 601
SEK	300 000	28 Mar 2017	33 899	33 899
SEK	500 000	8 Nov 2017	53 763	53 763
SEK	875 000	13 Sep 2018	99 977	99 977
SEK	1 125 000	13 Sep 2018	128 542	128 542
SEK	600 000	30 Oct 2019	58 267	58 267
SEK	650 000	17 Mar 2020	70 945	70 945
SEK	550 000	19 May 2020	61 009	61 009
EUR	500 000	4 Feb 2025	500 000	0
Total			2 739 854	2 313 375

<sup>1)</sup> Current portion of long-term bond EUR 270,632 (73,522) thousand.

<sup>2)</sup> Lent further to the shareholders.



OTHER LOANS				
US Private Placements				
Currency	Capital	Maturity date	EUR 1 000 2015	EUR 1 000 2014
USD	55 000	19 Aug 2018	53 111	53 111
GBP	35 336	19 Aug 2018	35 336	35 336
USD	50 000	26 Aug 2020	39 557	39 557
USD	50 000	26 Aug 2020	39 557	39 557
GBP	50 000	15 Nov 2022	56 116	56 116
Total			223 677	223 677
Collateral received			4 800	4 800
Total			228 477	228 477

# 19 Debts due in more than five years

EUR 1 000	2015	2014
Debts due in more than 5 years	1 967 455	1 682 936

## 20 Current liabilities

EUR 1 000	2015	2014
	2013	2014
Liabilities from joint ventures		
Accruals	5	1 656
Total	5	1 656
Liabilities from others		
Advances received	22 241	19 425
Trade payables	14 024	9 373
Total	36 265	28 798
Interest-bearing liabilities		
Bonds	270 632	73 522
Bank loans	104 583	89 095
Interest-bearing liabilities	116 392	233 563
Total	491 607	396 180
Accruals and deferred income		
Finnish State Nuclear Waste Management Fund	12 000	21 200
Accrued interests	56 671	52 228
Accrued personnel expenses	14 332	15 193
Accruals related to CO <sub>2</sub> emission rights	1 187	1 946
Other accruals and deferred income	97 685	17 025
Total	181 876	107 592
Total	709 753	534 226



# 21 Distributable equity

EUR 1 000	2015	2014
Retained earnings	9 360	9 360
Profit/loss for the financial year	0	0
Total	9 360	9 360

### 22 Commitments

EUR 1 000	2015	2014
Leasing liabilities		
Leasing liabilities falling due in less than a year	1 983	2 018
Leasing liabilities falling due later	57 553	59 473
Total	59 536	61 491

TVO has the right to redeem the lease object for EUR 42.7 million in 2025.

#### Nuclear waste management

Liability for nuclear waste management according to the Nuclear Energy Act 1)	1 369 400	1 349 100
TVO's funding target obligation 2016 (2015) to the Finnish State Nuclear Waste Management Fund	1 369 400	1 345 400
Collateral for nuclear waste management contingencies	137 620	152 710
Nuclear waste management loan receivables pledged to the Finnish State Nuclear Waste Management Fund	1 009 050	982 800

<sup>1)</sup> Based on the nuclear waste management programme and proposal for the liability made by the Company and which is to be confirmed by the Ministry of Employment and the Economy at the end of the year.

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

See note 25 Obligations and other commitments in the consolidated financial statements.



## 23 Derivative financial instruments

EUR 1 000	2015	2014
Interest rate derivatives		
Interest rate swaps (nominal value)	1 809 518	1 001 446
Fair value	7 969	9 872
Forward foreign exchange contracts		
Forward foreign exchange contracts (nominal value)	159 508	191 216
Fair value	29 829	13 764
Cross-currency swaps		
Cross-currency swaps (nominal value)	856 963	930 421
Fair value	39 327	12 482

#### 24 Series of shares

#### Share capital and series of shares

	Number <b>2015</b>	2014	EUR 1 000 <b>2015</b>	2014
A-series - OL1 and OL2				
1 Jan	680 000 000	680 000 000	115 600	115 600
Change	0	0	0	0
31 Dec	680 000 000	680 000 000	115 600	115 600
B-series - OL3				
1 Jan	680 000 000	680 000 000	484 765	484 765
Change	0	0	0	0
31 Dec	680 000 000	680 000 000	484 765	484 765
C-series - TVO's share in the Meri-Pori coal-fired power plant				
1 Jan	34 283 730	34 283 730	5 828	5 828
Change	0	0	0	0
31 Dec	34 283 730	34 283 730	5 828	5 828
Total	1 394 283 730	1 394 283 730	606 193	606 193

According to the Articles of Association, TVO delivers electricity to its shareholders on the so-called Mankala principle, i.e. it delivers the electricity produced or procured to its shareholders in proportion to their shareholding in each series. Each of the shareholders of each series is liable for the variable and fixed annual costs that are specified in detail in the Articles of Association. The Company prepares annually a balance sheet divided into series of shares. The balance sheet, which will be presented to the Shareholders' Meeting, specifies the assets, liabilities and equity of the different series of shares.



# 25 Carbon dioxide emission rights

In principle TVO has, on 31 December, emission rights at least the same amount as the actual annual emissions are. If the actual emissions exceed the amount of the emission rights that company possesses, the company has booked the expense for exceeding emission rights at the market value on 31 December.

	<b>2015</b> t CO <sub>2</sub>	EUR 1 000	2014 t CO <sub>2</sub>	EUR 1 000
Total annual emissions from production facilities	139 484		334 839	
Possessed emission rights	148 029		335 237	
Emission rights and emission right reductions bought 1)	148 029	1 173	330 075	1 946

TVO is responsible for the amount of emission rights corresponding to its share of the production of the plant.

<sup>1)</sup> The purchases of the emission rights and emission right reductions are included in materials and services. The emission rights that company possesses on 31 December are included in intangible rights on the balance sheet and emission right reductions.



## Proposals to the Annual General Meeting

Teollisuuden Voima Oyj's distributable equity as of December 31, 2015 amounted to EUR 9,360,000. The Board of Directors proposes to the Annual General Meeting that no dividend shall be paid.

# Signatures for the report of the Board of Directors and financial statements

Helsinki, February 29, 2016

Lauri Virkkunen Matti Ruotsala
Hannu Anttila Jukka Hakkila
Tapio Korpeinen Pekka Manninen
Markus Mannström Markus Rauramo

Tiina Tuomela Rami Vuola

Jarmo Tanhua
President and CEO

#### The Auditor's Note

Our auditor's report has been issued today.

Helsinki, February 29, 2016

PricewaterhouseCoopers Oy Authorised Public Accountants

Jouko Malinen
Authorised Public Accountant



## Auditor's report

(Translation from the Finnish Original)

To the Annual General Meeting of Teollisuuden Voima Oyj

We have audited the accounting records, the financial statements, the report of the Board of Directors and the administration of Teollisuuden Voima Oyj for the year ended 31 December, 2015. The financial statements comprise the consolidated statement of financial position, income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows, and notes to the consolidated financial statements, as well as the parent company's balance sheet, income statement, cash flow statement and notes to the financial statements.

#### Responsibility of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, as well as for the preparation of financial statements and the report of the Board of Directors that give a true and fair view in accordance with the laws and regulations governing the preparation of the financial statements and the report of the Board of Directors in Finland. The Board of Directors is responsible for the appropriate arrangement of the control of the company's accounts and finances, and the Managing Director shall see to it that the accounts of the company are in compliance with the law and that its financial affairs have been arranged in a reliable manner.

#### **Auditor's Responsibility**

Our responsibility is to express an opinion on the financial statements, on the consolidated financial statements and on the report of the Board of Directors based on our audit. The Auditing Act requires that we comply with the requirements of professional ethics. We conducted our audit in accordance with good auditing practice in Finland. Good auditing practice requires that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and the report of the Board of Directors are free from material misstatement, and whether the members of the Board of Directors of the parent company or the Managing Director are guilty of an act or negligence which may result in liability in damages towards the company or whether they have violated the Limited Liability Companies Act or the articles of association of the company.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements and the report of the Board of Directors. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of financial statements and report of the Board of Directors that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements and the report of the Board of Directors.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



#### **Opinion on the Consolidated Financial Statements**

In our opinion, the consolidated financial statements give a true and fair view of the financial position, financial performance, and cash flows of the group in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU.

#### Opinion on the Company's Financial Statements and the Report of the Board of Directors

In our opinion, the financial statements and the report of the Board of Directors give a true and fair view of both the consolidated and the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of the financial statements and the report of the Board of Directors in Finland. The information in the report of the Board of Directors is consistent with the information in the financial statements.

#### **Other Opinions**

We support that the financial statements and the consolidated financial statements should be adopted. We support that the Members of the Board of Directors and the Managing Director of the parent company should be discharged from liability for the financial period audited by us.

Helsinki, 29 February, 2016

#### **PricewaterhouseCoopers Oy**

**Authorised Public Accountants** 

Jouko Malinen
Authorised Public Accountant



## Financial information in 2016

#### In 2016, Teollisuuden Voima Oyj will publish the interim reports as follows:

Interim Report for January–March 2016 on April 25, 2016
Interim Report for January–June 2016 on July 18, 2016
Interim Report for January–September 2016 on October 24, 2016