

2017

Annual Report

SUSTAINABLE
FINNISH
ENERGY



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Energy system requires flexibility

Towards the end of 2017, the economy of Finland finally started to grow, which also increased the expectations towards the electricity market. According to estimates, however, the expectations of the electricity market picking up speed will not be realised until a couple of years from now. Even though the fog is slowly receding, the energy industry still has challenges to face.

As the share of wind and solar power, which are dependent on weather conditions, continues to rise, our energy system will require all the flexibility it can have, both in the form of flexible production and consumption, and in the form of the storage of electricity. Meanwhile, the risk of power shortages will continue to increase in the next few years. At the end of the year, the European Network of Transmission System (ENTSO-E) also paid attention to the deteriorating capacity situation in Finland in a report.

In 2017, Pohjolan Voima continued the development of hydropower, thermal power and nuclear power, as well as the improvement of its competitiveness. Furthermore, we closely monitored changes in our operating environment and progress of the energy revolution. This helps us retain our ability to respond to future challenges.

Close cooperation with hydropower stakeholders

The production of our hydropower company corresponded to that of an average year. We completed a renewal project of the automation systems at the Isohaara hydropower plant on Kemijoki river. Earlier, we renovated the Melo power plant on Kokemäenjoki river and the Iijoki power plants. The hydropower plants are in good condition and their energy efficiency is excellent due to the restorations.

Our voluntary environmental hydropower projects proceeded. At Iijoki, we participated in an Iijoki waterway vision project managed by the Oulu Regional Council. We are also involved in an ongoing migratory fish stock restoration spearhead project where PVO-Vesivoima and Metsähallitus have applied for a permit to build a fishway at the Raasakka power plant. The Natural Resources Institute Finland continued its research on downriver migration and a development project of the old riverbed at Raasakka, as well as signed an agreement on the ecological flow at the Iminjoki control dam. At Kemijoki, cooperation through a migratory fish project coordinated by the Regional Council of Lapland continued.

Applications by the Centre for Economic Development, Transport and the Environment for Lapland on renewal of the Kemijoki and Iijoki fishery obligations cast a shadow on the future of the cooperation. I believe, however, that the broad-based cooperation and the variety of methods applied will lead to good results.

Thermal power plants prepare for the demands of best technology

Pohjolan Voima's combined heat and power plants produce district heat and process steam for local industry and communities, as well as electricity. In 2017, we prepared for the application process of environmental permits to meet requirements on best available techniques for large combustion plants. Furthermore, we made several replacement and renovation investments for the thermal power plants over the course of the year. The prevailing market situation makes the future outlook of the CHP plants uncertain.

PVO-Lämpövoima's coal condensing power plants in Kristiinankaupunki and Tahkoluoto, Pori were not included in the new power reserve period that started in the summer of 2017. We are preparing for their dismantling while seeking for opportunities to utilise the remaining infrastructure.

Hot tests started at Olkiluoto, Posiva's construction continued

The work on the OL3 plant unit at Olkiluoto proceeded, and a hot test stage that will take several months started in late 2017. Once the tests have been completed successfully, Olkiluoto 3 will meet the requirements for an operating licence and will proceed towards nuclear commissioning. According to the plant supplier's latest schedule, regular electricity production at the plant unit will start on schedule in May 2019. TVO applied for an operating licence for OL1 and OL2 for the next twenty years. The Olkiluoto nuclear power plant will continue to produce reliable domestic base-load power at world-class capacity factors.

Posiva Oy is constructing a safe disposal facility for its owners' spent nuclear fuel at Olkiluoto. The construction is progressing and the plan is to start the raise boring of a canister shaft and complete a full-scale test in 2018.

Responsibility means continuous development

In accordance with our responsibility programme, we select a couple of development areas each year. In 2017, we continued the development of our supply chains' responsibility by auditing the fuel production – peat, biomass and recycled fuels, etc. – at our thermal power plants. In our hydropower business, we started offering our partners responsibility orientation through an online training programme. We continued our dialogue with environmental organisations. The theme in 2017 was the future of cogeneration. We also developed our safety management. We will continue with these themes this year as well.

Skilfully, boldly, together

Pohjolan Voima effectively supplies electricity and heat for its shareholders at cost price. In this way, we secure the success of our customers, and our operations indirectly create jobs and wellbeing in the whole of Finland. We succeeded well in this task in 2017, considering the major challenges introduced by the energy revolution. I would like to thank all of the employees of Pohjolan Voima, our shareholders and our partners.

We will continue towards the future in compliance with our values – skilfully, boldly, together.

Lauri Virkkunen

President and CEO, Pohjolan Voima Oyj



Production year 2017

In 2017, Pohjolan Voima's electricity production was 10.9 TWh*. Our share of all electricity produced in Finland was 17%. Heat production totalled 3.2 TWh.

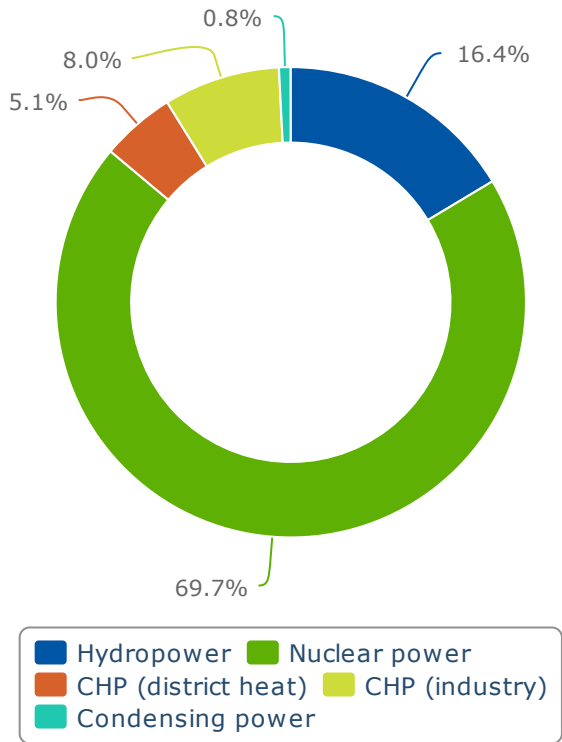
Pohjolan Voima's total electricity production capacity was 2,653 MW at the end of 2017. Its share was about 16% of Finland's total electricity production capacity. Heat production capacity was 1,563 MW. The total electricity production capacity includes the capacity of PVO-Lämpövoima Oy's condensing power plants (477 MW), which are no longer in production operation.

* Under Production year, Pohjolan Voima's volumes of electricity and heat production are shown in accordance with Pohjolan Voima's shares in power plants, which is why they differ from the Group figures given in the financial statements.

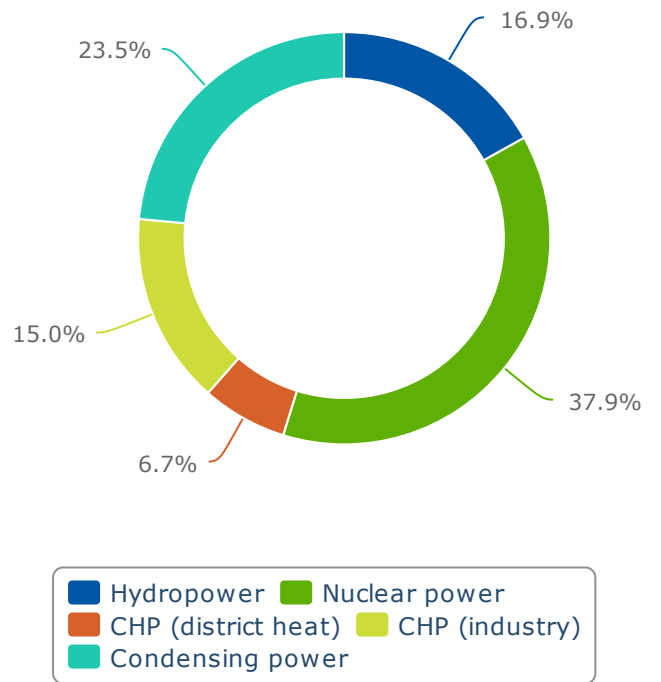
Also see [Pohjolan Voima's production capacity on 31 December 2017](#)

Finland's electricity consumption in 2017 was 85.5 TWh. Electricity production totalled 65.0 TWh, while net imports into Finland amounted to a record volume of 20.4 TWh. In 2017, power consumption increased by 0.4% from the previous year. Industrial power consumption increased by 1.7% and the power consumption of other sectors decreased by 0.7% from the previous year. The decrease was due to the winter being milder than in the previous year.

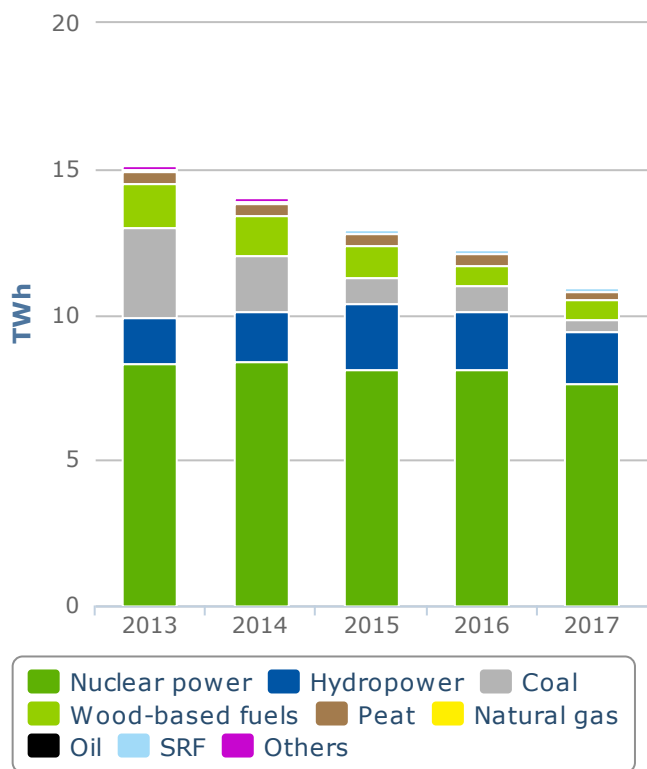
Pohjolan Voima's electricity production in 2017, 10.9 TWh



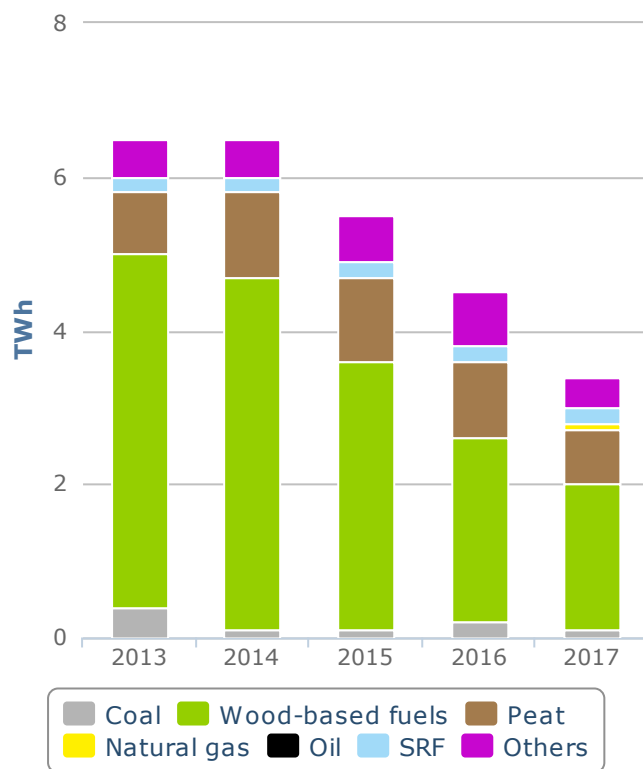
Pohjolan Voima's electricity production capacity on 31 December 2017, 2653 MW



Pohjolan Voima's electricity production, by energy source in 2013 - 2017, TWh



Pohjolan Voima's heat production, by energy source in 2013 - 2017, TWh

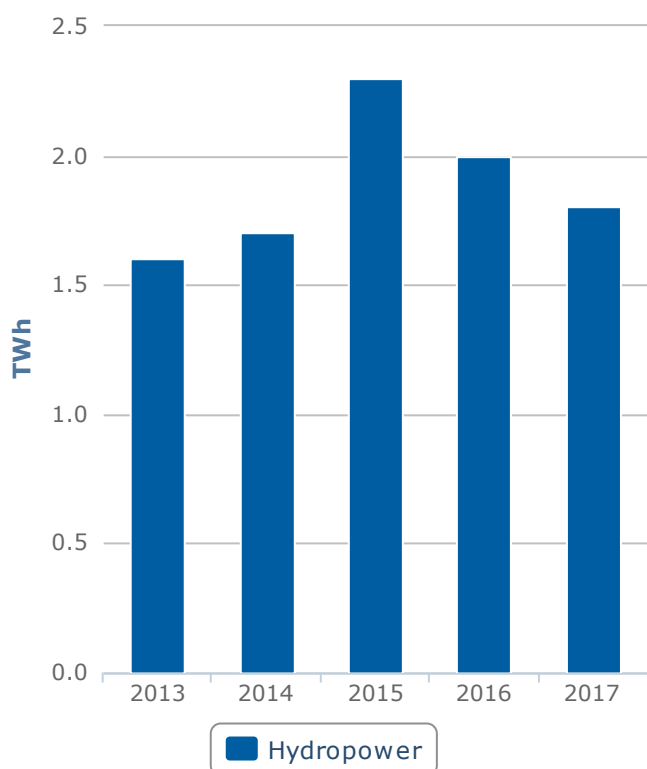


Normal year for hydropower production

Pohjolan Voima has a total of 12 hydropower plants located along the Iijoki, Kemijoki, Kokemäenjoki and Tengeliönjoki rivers. The combined electricity generation capacity of these plants is 541 MW, of which Pohjolan Voima's share is 449 MW. Pohjolan Voima's hydropower capacity increased by 2 MW when our associate company Länsi-Suomen Voima Oy's power plant renewal project was completed at the end of the year.

In 2017, a total of 1.8 TWh of electricity was produced using hydropower, which is close to the production volume for an average year.

Pohjolan Voima's hydropower production in 2013 - 2017, TWh



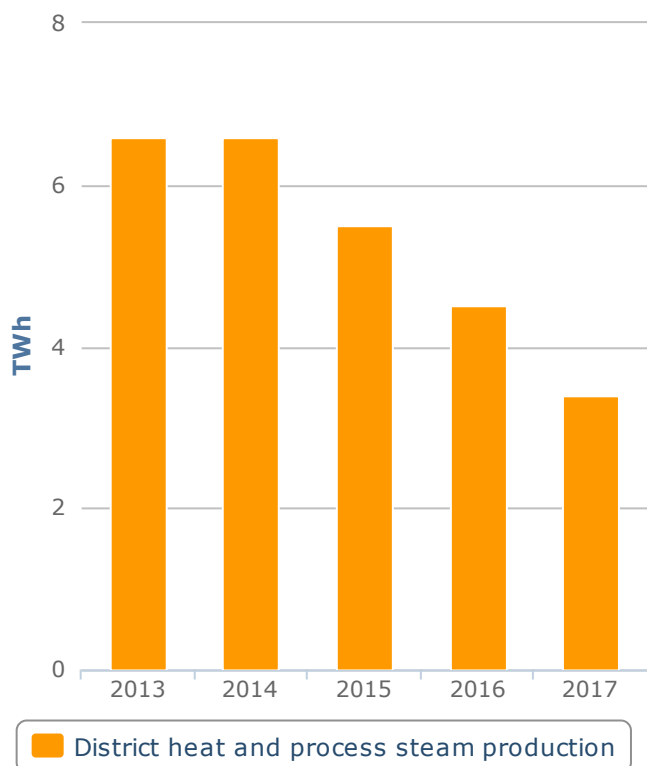
Thermal power production decreased

In its thermal power business, Pohjolan Voima's total capacity is 1,198 MW, of which 575 MW is combined heat and power production and 623 MW is condensing power production. The condensing power production capacity includes PVO-Lämpövoima's condensing power plants (477 MW), which are no longer in production operation.

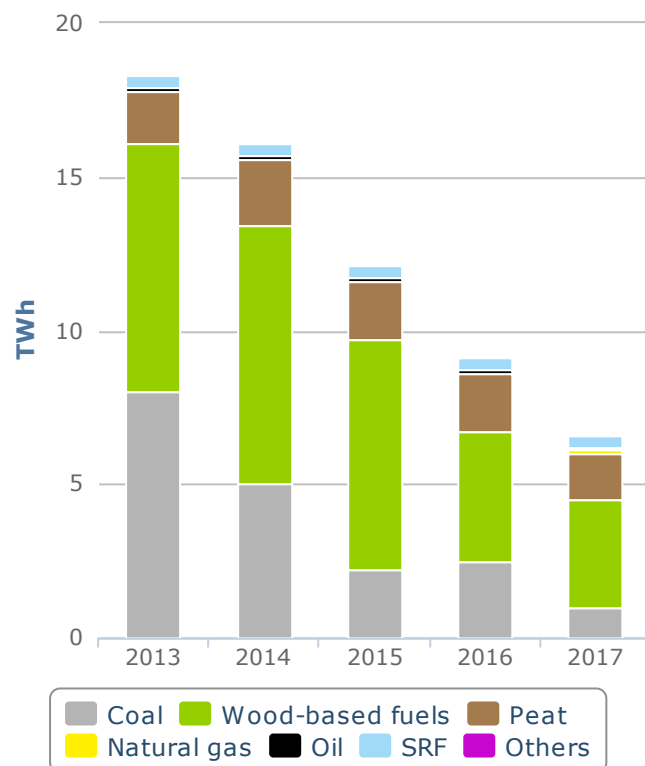
The combined heat and power plants produce process steam for local industry and district heat for local communities, as well as electricity. In 2017, the heat output of the combined heat and power plants was 3.2 TWh (compared to 4.3 TWh in 2016) and the electricity output was 1.4 TWh (1.8 TWh). The condensing power plants produced 0.1 TWh of electricity (0.4 TWh). The volume of heat production has decreased due to reasons such as the low electricity market price, the fact that the power plant of Kokkolan Voima broke away from Pohjolan Voima and the fact that the heat production volume of Porin Prosessivoima's power plant decreased due to lower demand caused by a fire in the adjacent industrial area.

In 2017, the thermal power plants consumed 3.4 TWh of wood-based fuels, 1.5 TWh of peat, 1.0 TWh of coal and 0.4 TWh of recycled fuel. Oil and natural gas are used as startup and backup fuels.

Pohjolan Voima's district heat and process steam production in 2013 - 2017, TWh



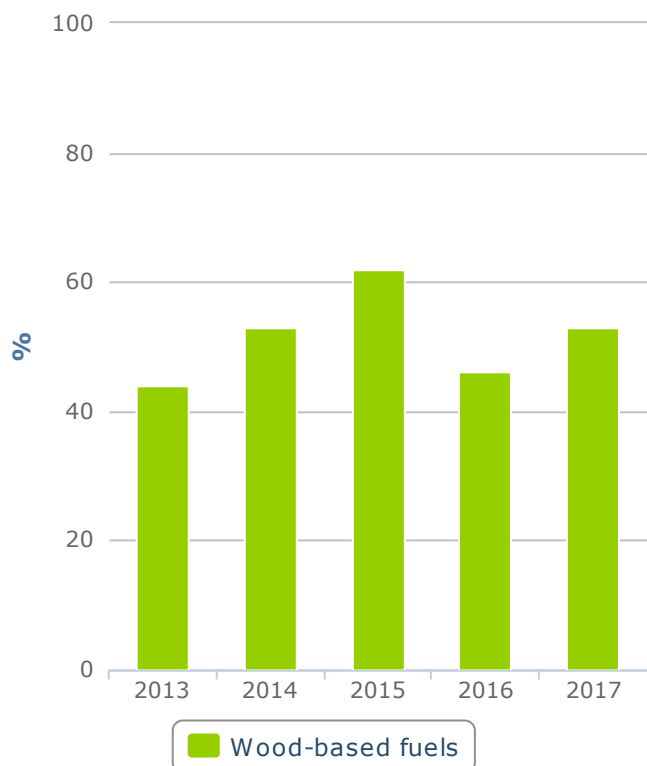
Pohjolan Voima's fuels in heat and electricity production in 2013 - 2017, TWh



Did you know that we promote the circular economy by using the heat and by-products generated in industrial processes as our energy sources?

The category "Others" in energy sources refers to heat obtained for a power plant. This is possible at a couple of our industrial power plants where the heat generated by the industrial processes replaces some of the fuels used by the power plant in the production of energy. This category also includes a small amount of other fossil fuels, such as process gas, used at one of our power plants. These are generated in the industrial process and can be utilised at the power plant as fuels. The category "Others" in the fuel graphs only includes these fuels, not any heat from other processes.

Share of wood-based fuels in heat and electricity production in 2013 - 2017, %



* The use of wood-based fuels was lower in 2016 and 2017 due to Pohjolan Voima's divestment of four subsidiaries that own bioenergy plants.

Major modernisations at the Olkiluoto nuclear power plant

Teollisuuden Voima Oyj (TVO), a joint venture partially owned by Pohjolan Voima, operates a nuclear power plant in Olkiluoto, Eurajoki. After a power increase at the turn of the year, the combined output of the nuclear power plant's two units is now 1,770 MW.

The Olkiluoto nuclear power plant had a good production year all in all, but the production volume was lower due to major modernisations. Due to the modifications, the rated output of the OL2 unit increased to 890 MW at the turn of the year (from 880 MW). Total production volume of the entire power plant was 13.4 TWh. Pohjolan Voima's share of the production amounted to 7.6 TWh. The capacity factor of the plant units was 87.2%.

Read more at www.tvo.fi



Responsibility

Responsible operations are part of Pohjolan Voima's strategic outlook. Our values – skilfully, boldly, together – create the foundation for our corporate responsibility. For Pohjolan Voima, responsibility means the responsible management of financial, social and environmental issues.

Pohjolan Voima's cost price operating model is the foundation of the responsible operations: our extensive cooperation network ensures that the benefits from Finnish electricity and heat production can be felt all around Finland. We do our part in enabling the success of our owners, and our operations indirectly create jobs and wellbeing for the whole of Finland.

Our responsible operations are guided by the [responsibility policies](#) approved by our Board of Directors. Our responsibility programme, or the action programme to develop responsible corporate operations, describes the current state of factors of major importance to Pohjolan Voima's business operations and to its stakeholders, as well as the needs for development and monitoring of these factors. The responsibility programme is updated on an annual basis. The responsibility programme includes ten factors that have been identified as important and have been placed under monitoring. Development measures have been established for some of these factors.

[Visit our website to read more about our responsibility programme and responsible operations.](#)

We develop selected responsibility focus areas

Each year, we select focus areas for the development of responsibility. In 2017, we developed our responsible operations in the following ways:

- We ensured responsible operating methods throughout the value chain
- We develop our NGO cooperation
- We launched a project on promotion of safety management
- We improved our responsibility reporting

We ensure responsible operating methods throughout the value chain

In 2017, we continued the development of our responsible operating methods in our value chain and expanded the development scope from thermal power to hydropower and the responsibility of our partners. We audited two of the recycled fuel suppliers in our thermal power production value chain and continued to audit our peat suppliers in cooperation with our production companies.

We promoted responsible hydropower production through several voluntary cooperation projects. Furthermore, we expanded our online responsibility course to cover our hydropower partners.



Case: Audit of recycled fuel supplier

As part of the development of the responsible operating methods in our value chain, our experts conduct regular fuel delivery audits to ensure that the fuel delivery chain is responsible.

In May, we audited our recycled fuel supplier Lassila & Tikanoja, a company that delivers part of the recycled fuel as well as part of the separately collected and sorted energy and construction waste from trade and industry used at our biopower plants.

We develop our NGO cooperation

Cooperation with NGOs was introduced as an area for development in responsible corporate operations in 2016. We continued the dialogue in 2017. We met with representatives of NGOs that are crucial for our operations and invited representatives of NGOs to a discussion forum on the prerequisites of cogeneration that we arranged in the spring.

Furthermore, in connection with a stakeholder survey, we requested opinions from NGOs on our work with responsibility and the development of cooperation. Responsibility issues that are particularly important for the representatives of the NGOs include biodiversity and related issues, as well as fish and the restoration of the natural lifecycle of migratory fish species. Some of the respondents wondered whether we will be able to achieve our responsibility goals in practice. The opinions of most of the respondents on our work with responsibility and taking the environment into account in our operations were negative.

Most of the NGO representatives wished for more cooperation between NGOs and Pohjolan Voima. We will continue the dialogue and the development of the cooperation in 2018.

We develop safety management

In 2017, we started to prepare a safety management handbook for the Group. The handbook will include more systematic instructions on different aspects of safety management, definitions and updated plans. The project will continue in 2018.

We improved our responsibility reporting

We reviewed and assessed the need to develop our responsibility reporting practices. We added more information on responsibility into our annual report. We will continue to develop our reporting practices as necessary.

Appropriate management and improvement of HR and environmental issues are an important part of responsible operations

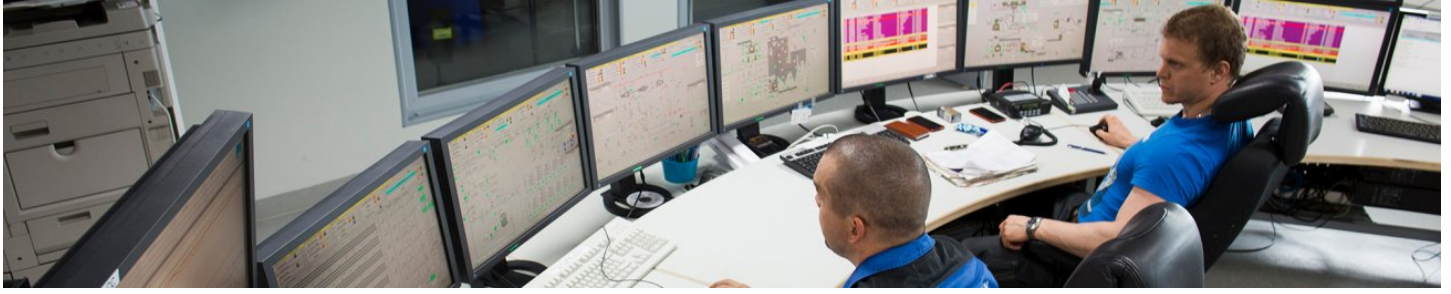
As part of our responsibility efforts, we apply best practices in our environmental, energy efficiency and occupational health and safety operations, and we strive to continuously improve them.



We systematically improve our energy efficiency

Each of our production companies sets its own energy efficiency goals. The energy efficiency system used by our power plants is certified and the companies are also included in energy efficiency agreements for the season 2017–2025.

[Read more about our energy efficiency improvements](#)



Personnel

The changes in the operating environment of energy companies as well as the status of the electricity market continue to reflect on the operations and personnel of Pohjolan Voima. Our personnel have demonstrated a solid ability to change, professional competence, solidarity and commitment in the midst of upheavals.

As in the previous years, in 2017 we realised a personnel survey. In addition to feedback from the personnel, we assessed our management practices. The response rate of the personnel satisfaction survey increased to around 87% from the previous year. The results of the personnel survey were reviewed with the personnel and will be utilised in the future. According to the personnel survey, there is a strong sense of solidarity at Pohjolan Voima and employees are proud of their work, and feel that they are given responsibility and that the company trusts in their competence. All in all, the employees consider Pohjolan Voima a good place to work. They are unsecure about the future, however.

The strategy and shared values of Pohjolan Voima – skilfully, boldly, together – and the responsible operating method influence everything we do and guide our personnel policy.

Adjustments to operations due to changes in the operating environment and the challenging status of the electricity market was continued in 2017 by revising the operating model of the energy management business and improving the operations of the financial unit. More of Pohjolan Voima's services were outsourced to partners.

Developing competence through shared training

In 2017, personnel development focused on shared training courses on, for instance, the energy industry and energy business, responsibility, corporate culture, work practices, and social media in communication and expert work.

A personal appraisal discussion is arranged annually with each employee. In addition, supervisors support their teams through regular monthly discussions and other suitable practices in accordance with the objectives.

Responsibility is part of the everyday work

For Pohjolan Voima, responsibility is part of the everyday work, strategic outlook and corporate culture. It means responsible management of financial, social and environmental issues.

All employees and members of Pohjolan Voima's administrative bodies must complete electronic training courses on good business practices and competition law. Examples and exercises included in these training courses make the operating methods part of the employees' everyday lives, which boosts their commitment in the good business practices and the proper competition law practices.

Developing an interactive corporate culture

We initiated a corporate culture development project that covers the entire Group. It consists of four subprojects: the future and our strategy, all of us as communicators, new work practices, and a working method reform. The goal of these subprojects is to promote Pohjolan Voima's corporate culture, particularly as it comes to motivation, communication, listening to others and social inclusion, as well as improve the employees' experiences of these issues. The corporate culture development project Yhdessä! will continue in 2018.



Work practice reform increases flexibility and improves wellbeing

Our new work practices support flexible work of experts regardless of the time and location. Furthermore, the new practices – such as the introduction of cloud services – have increased openness and transparency of communication.

Occupational health and safety is measured by monitoring indicators such as the number and frequency of accidents among our own employees and the employees of our partners, as well as the number of safety and environmental observations made. Pohjolan Voima's accident frequency was 9.6 in 2017, and 1,258 observations were submitted by employees and partners.



Accuracy improves occupational health and safety

A new challenge in 2017 was motivating all of the employees to make observations about safety and environmental issues. Each employee of the Pohjolan Voima Group made almost two observations on average, which is clearly more than before. The better we observe our work environment, the better we can anticipate risks.

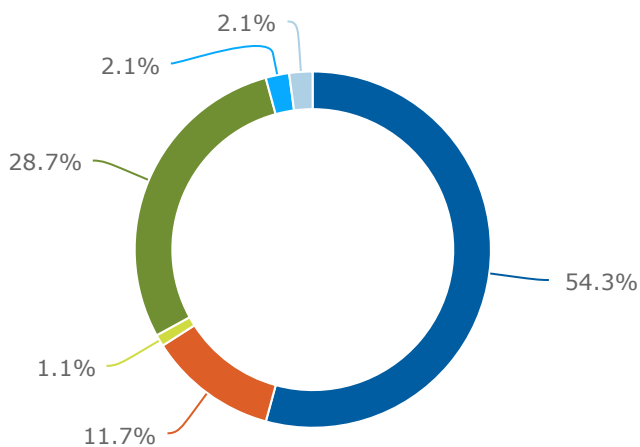
[Read more about the OHS observations on our website](#)

Key personnel figures in 2017

At the end of 2017, the number of our personnel was 106 (2016: 123), of whom 12 had a fixed-term employment relationship (2016: one non-permanent employee). The number of personnel decreased by a little less than 14% year-on-year due to a reduction in condensing production, which caused a reorganisation of the parent company's operations. The number of workers was reduced by seven, and the number of office employees by ten. The number of non-permanent employees increased to ensure the high-quality implementation of the work on the PVO-Lämpövoima power plants, in particular.

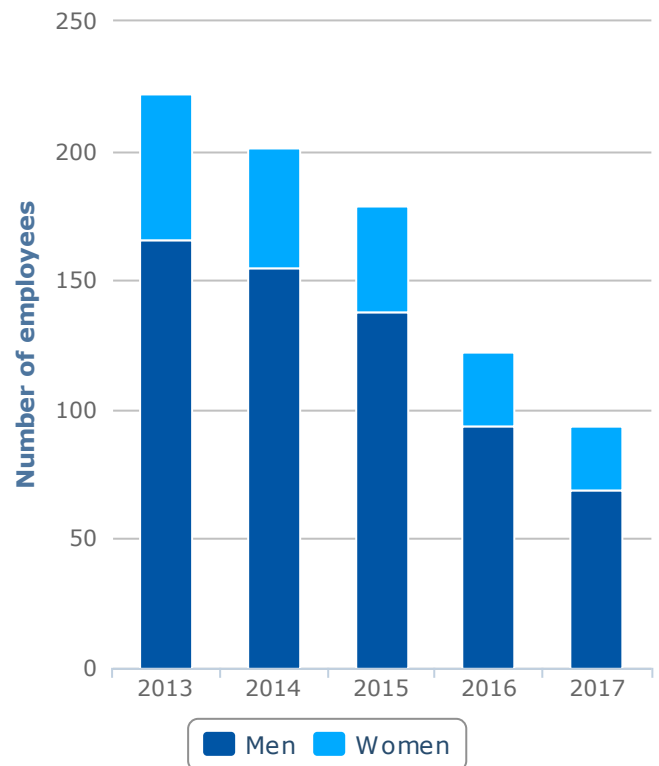
The prevailing working time arrangement is full-time work. At the end of 2017, a total of 4.7% (5.7%) of the personnel were part-time employees. There were a total of six summer employees. 26.6% (23%) of the permanent employees were women. Average age of the permanent employees was 45 (45) years. The total personnel turnover was 8.2% (18.2%).

Number of personnel by Group companies on 31 Dec 2017, in permanent employment, total 94

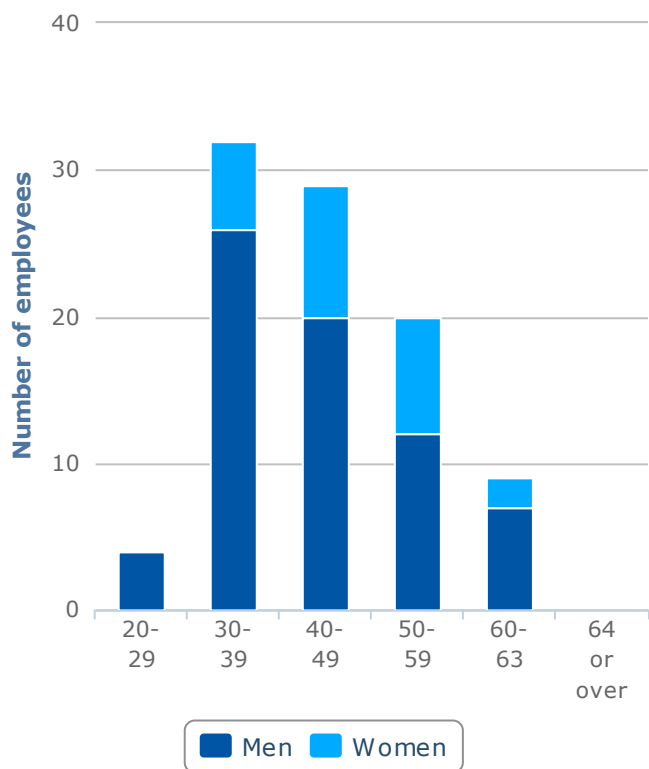


Pohjolan Voima Oy, 51	Kymin Voima Oy, 2
PVO-Vesivoima Oy, 11	
PVO-Lämpövoima Oy, 1	
Laanilan Voima Oy, 27	
Kaukaan Voima Oy, 2	

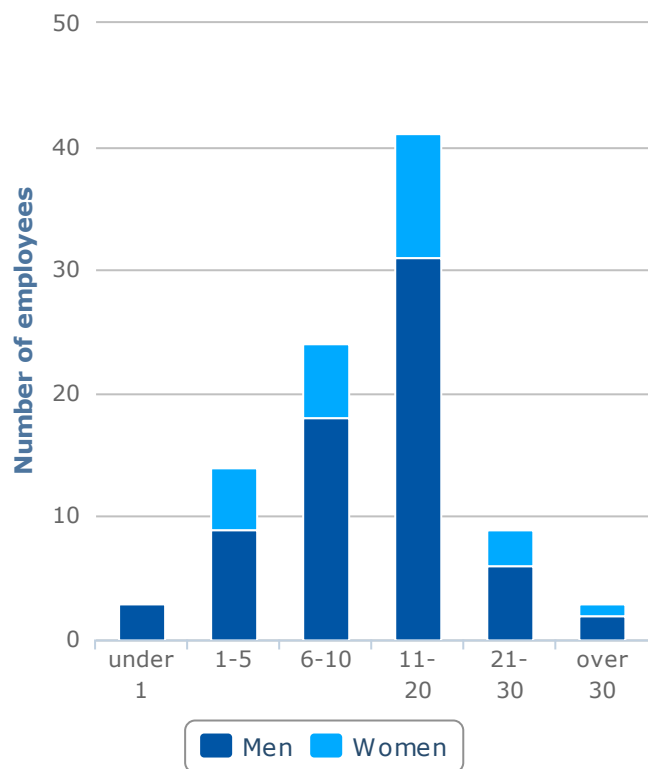
Number of personnel on 31 Dec in 2013 - 2017, in permanent employment



Breakdown of personnel by age on 31 Dec 2017, in permanent employment



Years of employment on 31 Dec 2017, in permanent employment





Environment

A basic requirement for persistent, long-term energy production is maintaining a safe, healthy and diverse environment. Pohjolan Voima's work to mitigate any environmental impact from the operations is guided by the Group's environmental and energy efficiency policy. We recognise and determine the environmental impact and risks resulting from our operations, the natural values related to our operations and opportunities to make our use of energy more efficient.

When preparing environmental impact assessments, we take into account the entire lifecycle of the power plant from project planning to decommissioning. We are committed to improving energy efficiency throughout our energy production modes and at all of our facilities.

Environmental management systems certified in accordance with ISO 14001 are in use in the majority of Pohjolan Voima's production companies, which helps ensure achievement of environmental objectives and continuous improvement of operations. Certification in accordance with the new standard (ISO 14001:2015) continued in 2017. Most of our production companies also use the energy efficiency systems ETJ+ or ISO 50001. Furthermore, the environmental management system of TVO (a joint venture of Pohjolan Voima) is EMAS registered.

There was one major environmental deviation in the production of Pohjolan Voima in 2017. Due to a valve leak, a couple of dozen litres of oil was released into the water at Isohaara power plant along Kemijoki river. Rescue operations were completed in cooperation with rescue authorities, and the oil was removed from the structures by means of absorption.

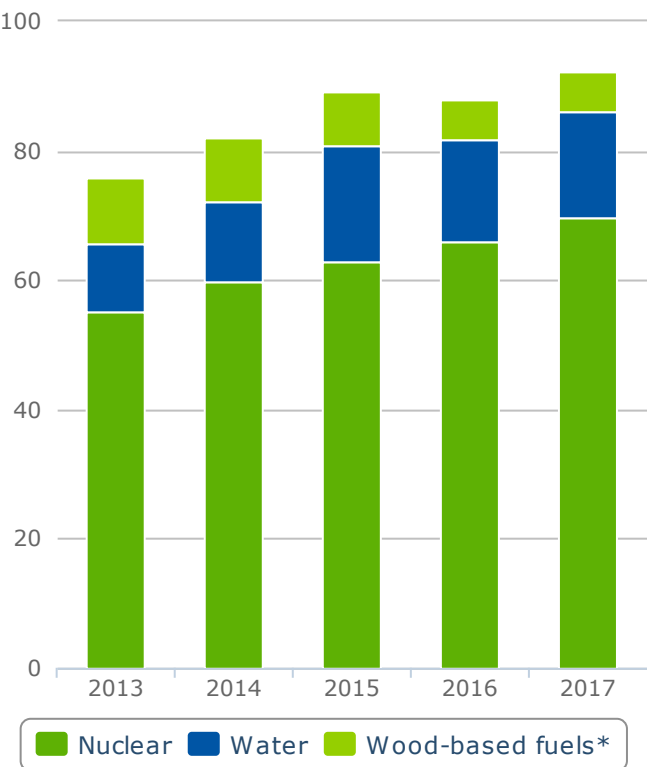
We exceeded our carbon-neutral production target of 90%

The share of carbon-neutral energy sources in Pohjolan Voima's electricity production amounted to 92% in 2017. The share was increased from the previous years, and we achieved our goal of producing more than 90% of our electricity with carbon-neutral sources.

Electricity production forms in Pohjolan Voima's portfolio that are considered to be carbon-neutral are hydropower, nuclear power and electricity generated with carbon-neutral wood fuels in thermal power plants. In recent years, the proportion of carbon-neutral energy sources has reached a new higher level due to the decreased use of coal in electricity production, and the good production years of hydropower.

Carbon-neutral sources of Pohjolan Voima's electricity production in 2013 - 2017, per cent

*Wood-based fuels are carbon dioxide-emission neutral.



Long-term management of the aquatic environment and cooperation to restore migratory fish

Hydropower production has regional and local impacts on water systems and fish stocks. In order to fulfil its obligation to sustain the fish stocks of the Kemijoki and Iijoki water systems and the sea area, our water company PVO-Vesivoima stocked around 2.5 million fry. Of these fry, 0.7 million were used to stock the Kemijoki sea and river area. This amounted to 17% of the total of 4.3 million fry stocked together with Kemijoki Oy.



The transport of river lampreys at the Iijoki river was highly successful

Almost 85,000 river lampreys were transported in the Iijoki river; the minimum required number is 60,000 specimens. In the Kemijoki river, the joint obligation of PVO-Vesivoima and Kemijoki Oy is 100,000 transported specimens. A total of 88,700 river lampreys were transported in the Kemijoki river in 2017. The obligations are evened out between years; in good years, the number transported exceeds the obligation. Due to the continuing deficit in the Kemijoki river, the volume of river lamprey being caught at the Isohaara power plant has been increased. The results from new catching locations and methods have been encouraging.

[For more information on fish stock management by the hydropower company, please visit our website.](#)

In 2017, inspections in compliance with the Dam Safety Act, to be held every five years, took place at the dams of the Kierikki and Jumisko power plants and at the Kostonjärvi and Imijärvi regulating dams. A leak detected in the retaining earth dam of the Melo power plant in 2016 was repaired by grouting throughout the year. The repair work continues. The repair work has not affected the power generation operations at the power plant.

We work with partners to restore migratory fish

In cooperation with the Iijoki region municipalities, PVO-Vesivoima participates in a three-year water system vision project called Ijoen otva. The project was launched by the Oulu Regional Council in late 2015 and co-financed by the EU.



Ijoen otva – for Iijoki river, together

The main goals of the extensive development project of the Iijoki river, Ijoen otva, are a shared vision on water systems, promotion of the restoration of migrating fish, protection of the Baltic Sea salmon population and promotion of smaller development measures that will increase the river's value.

To restore the migrating fish, the project has promoted arrangements along the Iijoki river fishways, developed efficient smart technologies, planned a downward migration route for migrating fish in the Iijoki river and investigated development of the old Raasakka riverbed.

Finland's largest spearhead project on migratory fish started at the Iijoki river

Our water company also participates in Finland's largest project on migratory fish, which has been prepared as part of the Ijoen otva project. The migratory fish project was started in 2017. Measures during the three-year project period include:

- Building a fishway at the Raasakka power plant
- Downward migration solutions for young salmon and trout
- A programme for planting young fish
- Fish transfers
- Measures to be implemented in the old riverbeds of Raasakka and Maalismaa

Coordinated by the Oulu Regional Council, participants of the project include the Ministry of Agriculture and Forestry, several municipalities in the region, the Iijoki water system fishing area and Metsähallitus. The project is part of the nature policy spearhead project of the Finnish Government.

In March 2017, PVO-Vesivoima and Metsähallitus filed a joint application with the Regional State Administrative Agency for Northern Finland for a water management permit to build the fishways at Raasakka. The planning of the construction of the fishways started in March 2017.



Old riverbed of the Iijoki river in Raasakka is developed through local cooperation

In connection with the Iijoen otva project, we are involved in the development of the old riverbed with other local parties. The aim of the five-year project is to improve the flow conditions and water quality, as well as to improve the state of the fish stock and promote recreational use of the area.

We supplied more water to the Uiskari fishway to facilitate the migration of fish upstream, removed some horsetail and restored swimming beaches in cooperation with local parties. A new disc golf course, ski tracks and snowmobiling routes were also opened.



Joint development of regulation

We are developing regulation of the source lakes of the Iijoki river in cooperation with the municipality of Taivalkoski and authorities. The year-round ecological flow that was already in use at Iminjoki river, at least two cubic metres per second, was confirmed in a cooperation agreement. A similar practice has also been used at Kostonjoki river.

As part of the cooperation agreement, we restored spawning beds suitable for grayling and trout at locations specified by the Centre for Economic Development, Transport and the Environment in the autumn of 2017. The success of these measures will be monitored for a period of two years.

We participate in the reviving of migratory fish stocks in the Kemijoki river

In March, the Centre for Economic Development, Transport and the Environment for Lapland filed a change application with the Regional State Administrative Agency for Northern Finland concerning stocking and fish stock management obligations with regard to Kemijoki. In October, the centre filed a similar application concerning Iijoki. In addition to entirely new requirements, this involves additions to current obligations.

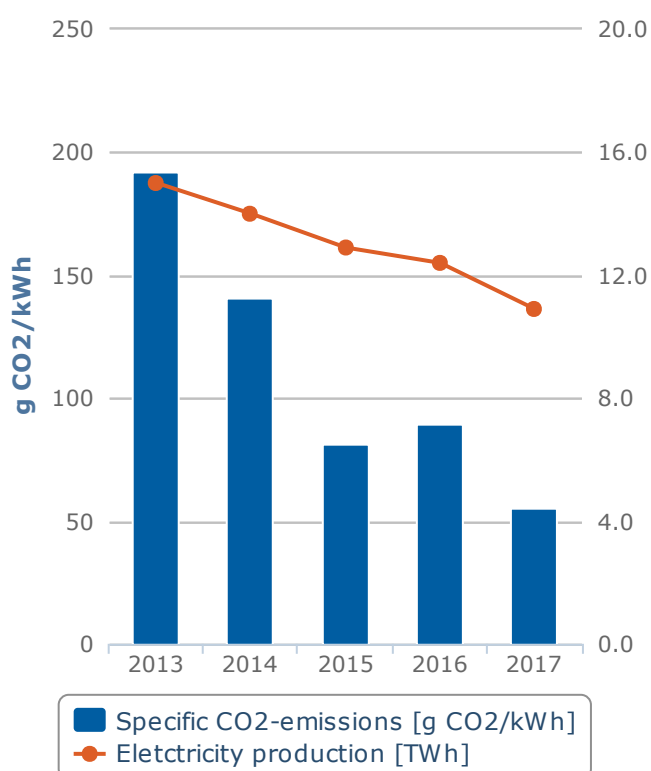
Emissions from thermal power going down

Pohjolan Voima's thermal power plants use wood-based fuels, peat, coal and recycled fuels as their primary fuels, and small amounts of natural gas and oil as auxiliary startup and backup fuels. The most significant environmental impact of thermal power production concerns the atmosphere. The power plants' emissions into the air vary according to the fuel and the production volumes of electricity and thermal power.

Carbon dioxide emissions from thermal power production were 1.0 million tonnes in 2017. In the past couple of years, the CO₂ emissions have been lower than before, mainly because less coal has been used. In 2017, the characteristic carbon dioxide emissions from electricity production were 56 g CO₂/kWh.

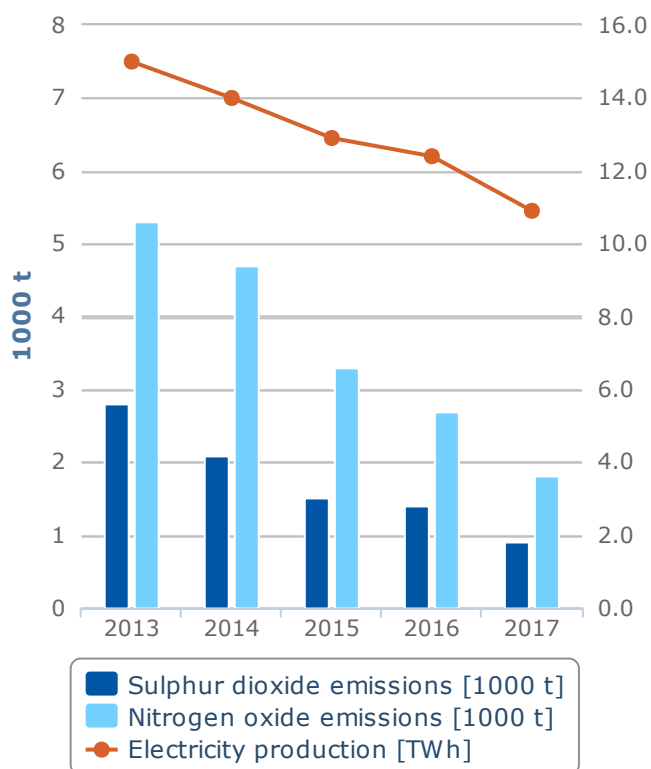
PVO-Vesivoima participated in a regional cooperation committee coordinated by the Regional Council of Lapland aiming at preparation of an action plan to revive the migratory fish stocks in the Kemijoki water system. An agreement to extend the project period was made in late 2017.

Pohjolan Voima's specific carbon dioxide emissions from electricity production in 2013 - 2017

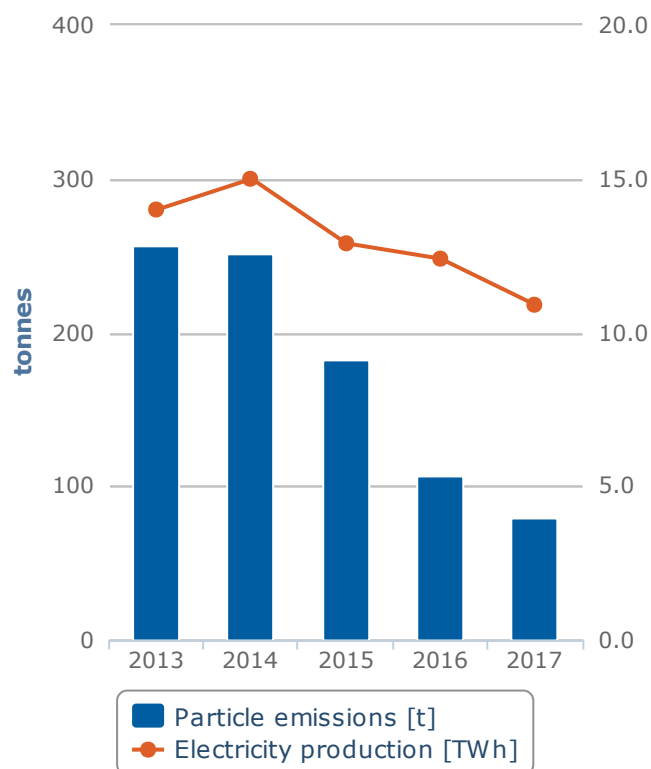


Other emissions into the air decreased from the previous year. Sulphur dioxide emissions were 0.9 thousand tonnes, nitrogen oxide emissions were 1.8 thousand tonnes and particle emissions were 0.1 thousand tonnes.

Acidifying emissions from Pohjolan Voima's heat and electricity production in 2013 - 2017



Particle emissions from Pohjolan Voima's heat and electricity production in 2013 - 2017



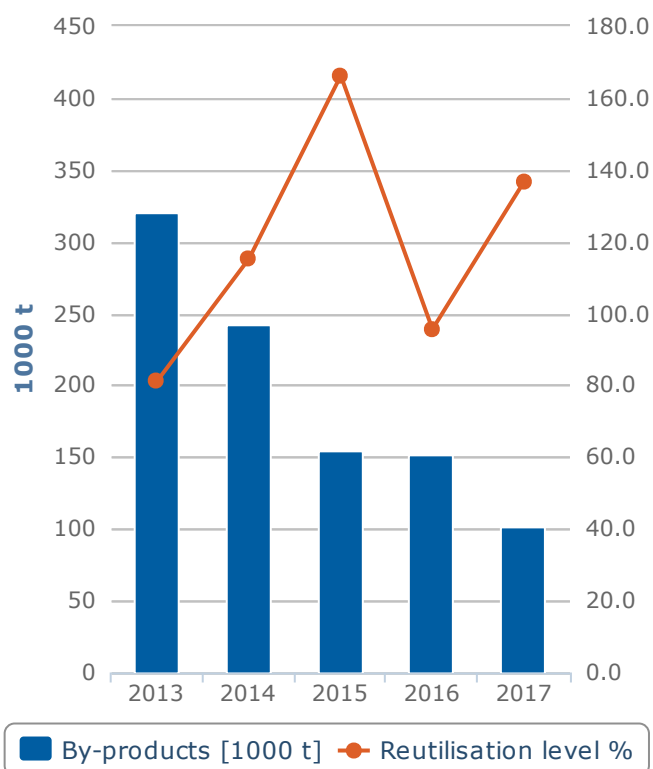
The IE Directive establishes that BAT conclusions made on the basis of the Best Available Techniques reference documents will become binding. The BAT conclusions related to the reference document on best available techniques for large combustion plants (LCP, Large Combustion Plant) were published on 17 August 2017. Power plants focusing on energy production are allowed four years to adjust their operations to the conclusions. The emission limits will be stricter in future environmental permits.

Utilisation of by-products at a good level

A total of 101 thousand tonnes of fly ash, bottom ash and gypsum were produced; fly ash and gypsum as by-products from flue gas cleaning in the context of the power plants' combustion process. Of this volume, 137% was reutilised in earth construction, the construction industry or as forest fertiliser in 2017. The utilisation rate is higher, because by-product storages accumulated in previous years were utilised in 2017.

Our goal is to reuse the maximum share of the by-products of thermal power production as raw material that could replace non-renewable natural resources, such as rock and stone.

Usage of by-products and reutilisation levels in 2013 - 2017

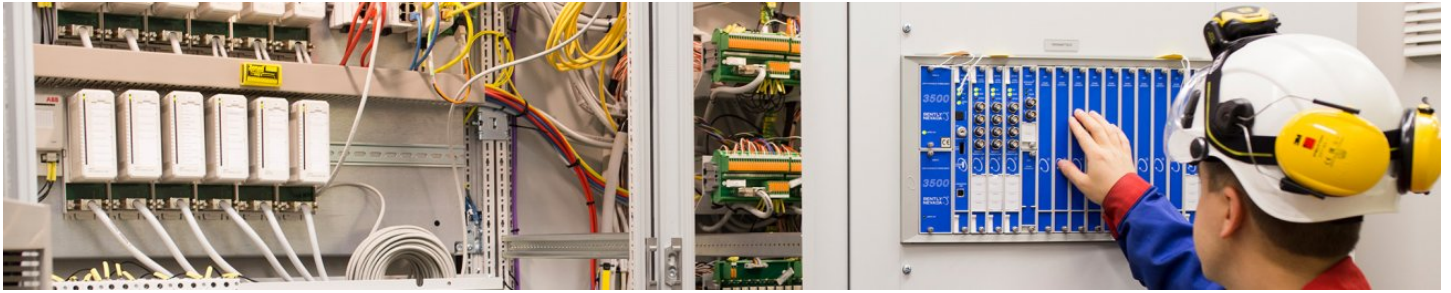


Nuclear power production complied with environmental permits

The Olkiluoto nuclear power plant units owned by TVO, a joint venture partially owned by Pohjolan Voima, complied with the company's environmental policy, environmental permits and environmental management system.

The greatest environmental impact of the Olkiluoto nuclear power plant results from heat released into the sea with cooling water; other environmental effects are negligible. Radioactive emissions into the air and water were below the limits set by authorities.

Read more at www.tvo.fi



Investments

We actively seek, design and implement responsible energy solutions to respond to any challenges that may arise at our power plants in the future. We continuously develop our existing capacity and manage the entire lifecycle of our power plants. The share of our carbon-neutral production has increased to over 90%.

In this millennium, we have invested €4 billion in carbon-neutral hydropower, thermal power and nuclear power. Of this, renewable energy accounts for €1.6 billion. Our most important investment project is the Olkiluoto 3 project of our joint venture TVO. In hydropower operations, we modernised the automation systems at the Isohaara power plant. An extensive renovation of the Harjavalta power plant of our associate company Länsi-Suomen Voima was completed in 2017. In thermal power, we invested in solutions to improve the competitiveness and efficiency of the energy production at our plants, reducing emissions at the same time.

Automation of Isohaara hydropower plant was successfully modernised

In the spring of 2017, we completed a renewal project of the electric automation systems at the Isohaara hydropower plant. The two-year project involved the automation systems of generators 3 and 4 at Vallitunsaari in Isohaara, which date back to the early 1990s. The modernisation project secures the production and control capacity of the power plant in the generation of renewable Finnish load-following power, and also results in more efficient monitoring of the equipment.



Renovation of Harjavalta hydropower plant was completed

Started in 2013, an extensive renovation of the Harjavalta power plant of our associate company Länsi-Suomen Voima was completed in 2017. The project included a major renovation of two existing generators and building a new generator. The project increased the power plant's capacity and annual electricity output

Raasakka hydropower plant's electrical automation systems to be renovated

We made a decision to start renovation of the electricity and automation systems of the Raasakka hydropower plant on the Iijoki river in the autumn of 2018. The investment will further enhance the efficiency of load-following capacity production in Finland and will ensure excellent reliability of the power plant. The turbines and generators will also be serviced during the project.

Permit application for Raasakka fishway filed

Our hydropower company PVO-Vesivoima and Metsähallitus filed an application for a water management permit to build fishways for the Raasakka power plant and control dam. The first fishway of the southern part of the Iijoki river is intended to be built at the Raasakka power plant as part of the Iijoki migratory fish spearhead project.

The fishway would create a connection to the Maalismaa power plant and the Martimojoki river, among other sites. The catching equipment intended to be built in conjunction with the fishway would make it possible to transfer sea trout to the breeding areas upstream in the Iijoki river.

Laanilan Voima invests in power distribution and reliability

In Oulu, we invested in the maintenance of the power distribution and reliability of the Laanilan Voima biopower plant. Started in 2016 and completed in the spring of 2017, the modernisation of a 6 kV switching station boosts regional power distribution and improves availability of the power plant. We also replaced the motor of a flue gas blower to improve the power plant's energy efficiency and adjustability. Furthermore, we built a new oil sump for the power plant.



Rauman Biovoima to invest in a further reduction of emissions

In Rauma, we built a new additive supply system that reduces emissions of the biopower plant of Rauman Biovoima in the summer of 2017. The investment allows us to better reduce and manage emissions from electricity production. More efficient emission control also enables us to increase our use of recycled fuels, which promotes the circular economy.

Large modernisation work conducted at Olkiluoto nuclear power plant

The largest modernization work in TVO's history was conducted at the Olkiluoto nuclear power plant, and the Company's safety culture, which is the base of all operations, was further developed. Thanks to the historically extensive and versatile improvements completed during the annual outages, the nominal output of the OL2 plant unit was raised at the turn of the year to 890 megawatts (previously 880 MW).

In January 2017, TVO submitted to the Ministry of Economic Affairs and Employment an application for a new operating license for the Olkiluoto 1 and 2 plant units to await the Government's decision. The operating license was applied for until the end of 2038. The current 20-year operating license must be renewed by the end of 2018.

Preparing the Olkiluoto 3 EPR plant unit for production proceeded

Preparing the Olkiluoto 3 EPR (OL3 EPR) plant unit for production proceeded in 2017. Simulator training for the operating personnel commenced in February. The cold functional testing to ensure the integrity of the primary circuit was completed in July. The hot functional testing phase started in December. In the hot functional tests that will take several months, the OL3 plant systems are tested as a whole, but without the fuel. According to the schedule updated by the Supplier in October, regular electricity production at the OL3 EPR plant unit will commence in May 2019.

The workforce at the site at the end of the year was about 2,000 persons. Occupational safety at

the site remained at a good level.

Read more at www.tvoy.fi

Posiva is constructing a final repository for 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.

The excavation work of Posiva's final disposal facility for spent nuclear fuel at Olkiluoto has progressed according to plan. The first excavations under the construction license were started in December 2016 and they are estimated to take two and a half years. The excavation work for the foundation of the encapsulation plant was completed.

Read more at www.posiva.fi

Financial statements 2017

Key figures (IFRS) of Pohjolan Voima Group 2017

IFRS	2017*	2016*	2015*	2014	2013	2012
Turnover, € million	455	512	573	643	722	838
Operating result, € million	10	-4	-3	3	23	10
Net interest-bearing liabilities € million	788	881	873	920	1 017	1 083
As percentage of turnover, %	173	172	152	143	141	129
Equity ratio, %	40	40	42	41	42	35
Total assets, € million	2089	2166	2296	2595	2577	2 398
Investments, € million	7	11	18	19	24	36
Average number of personnel	119	149	199	217	270	454

*Includes continuing and discontinued operations.

The Annual Report of the Board of Directors and the Financial Statements

Read more on the Annual Report of the Board of Directors and the Financial Statements at our online-annual report. They are also available in pdf-format. You can download the entire annual report or include selected pages into a pdf-document at the [Download center](#).

▶ **Annual report by the Board of Directors**

Financial Statements 2017

- ▶ **Consolidated statement of comprehensive income**
 - ▶ **Consolidated balance sheet**
 - ▶ **Consolidated statement of cash flows**
 - ▶ **Consolidated statement of changes in equity**
 - ▶ **Notes to the consolidated financial statements**
 - ▶ **Parent company financial statements (FAS)**
- ▶ **Board of Directors' dividend proposal**
- ▶ **Auditor's Report**

Annual Report by the Board of Directors 2017

Operating environment

In 2017, electricity consumption in Finland was 85.5 TWh (85.1 TWh in 2016). Finnish electricity production totalled 65.0 (66.1) TWh, while net imports into Finland amounted to a record volume of 20.4 (19.0) TWh. Imported electricity covered 24.0% (22.3%) of Finnish electricity consumption. Most of the imported electricity came from Sweden. The production volume of renewable energy and carbon-neutral electricity reached a new record level. Renewable energy sources represented 47% and carbon-neutral energy sources represented 80% of electricity. In 2017, power consumption in Finland increased by 0.4% on the previous year. Industrial power consumption increased by 1.7% and the power consumption of other sectors decreased by 0.7% on the previous year. The decrease was due to the winter being milder than in the previous year.

Nord Pool Spot trade amounted to 512 (505) TWh. The annual average system price was €29.41 (26.91) per MWh, while the annual average of the Finnish area price was €33.19 (32.45) per MWh. The increase in the price of electricity was due to the lower water levels in the Nordic countries and higher fuel prices.

The EUA emission allowance price remained low throughout the year and varied between €4.35 and €8.21. The EU Member States, Parliament and Commission reached an agreement strengthening the steering effect of emissions trading for 2021–2030. The amount of emission allowances to be issued will decrease by 43% in the emissions trading sector by 2030 in comparison with 2005. The intention is to double the amount of emission allowances (24%) to be transferred to the market stability reserve for five years as of 2019. The result of the negotiations will be confirmed in early 2018.

The Finnish Parliament confirmed the national energy and climate strategy until 2030. According to the strategy, the proportion of renewable energy out of energy end use will be increased to 50% and self-sufficiency in terms of energy end use will be increased to 55% by 2030. In addition, the use of coal will be abandoned by 2030, and the energy use of oil will be reduced by 50% by 2030, in comparison with 2005.

Pohjolan Voima's heat and power production

In 2017, Pohjolan Voima's total electricity supply was 11.9 (13.4) TWh. The Group's own electricity production accounted for 11.4 (12.8) TWh, of which the parent company's supplies to its shareholders were 10.9 (12.4) TWh. The subsidiaries supplied 0.5 (0.5) TWh to their other shareholders. Purchases from the Nordic electricity markets were 0.5 (0.5) TWh, and sales amounted to 0.4 (0.5) TWh. Heat deliveries were 4.5 (5.5) TWh.

Nuclear power made up 63.7% (60.8%) of the electricity supply. Teollisuuden Voima Oyj's (TVO) Olkiluoto nuclear power plant generated 13.4 (14.4) TWh of electricity, of which Pohjolan Voima obtained 7.6 (8.1) TWh, in accordance with its shareholding. The joint capacity factor of the Olkiluoto plant units was 87.2% (93.0%).

Hydropower accounted for 1.8 (2.0) TWh, or 15.0% (14.8%) of the electricity supply. The production of hydropower decreased on the previous year and was close to the production volume of a normal year.

Pohjolan Voima produced 0.1 (0.4) TWh of condensing power, which represented 0.7% (3.0%) of the electricity supply. The production of condensing power remained low because of low market prices and higher fuel prices. A total of 1.9 (2.3) TWh of electricity was generated by combined heat and power (CHP) plants.

Electricity supply (GWh)	2013	2014	2015	2016	2017
Nuclear power	8,296	8,372	8,086	8,136	7,602
Hydropower	1,566	1,745	2,297	1,983	1,794
CHP	3,502	3,254	2,533	2,313	1,919
Condensing power	2,193	1,200	388	396	82
Purchases	673	753	790	545	533
Total	16,229	15,324	14,094	13,373	11,930

Investments

The total investments of the Pohjolan Voima Group, excluding financial investments and the purchase of emission allowances, amounted to €6.6 (11.2) million.

PVO-Vesivoima Oy completed the automation modernisation project at the Isohaara power plant, and the repair of the dam of the Melo power plant continued. PVO-Vesivoima's investments totalled €2.2 million. Laanilan Voima Oy invested in the replacement of its 6-kilovolt switching station and in an oil sump. Laanilan Voima's investments totalled €2 million. The Group's remaining investments were made in replacements and renovations.

Between 2004 and 2017, Pohjolan Voima Oyj has invested a total of €780.8 (720.6) million in the new Olkiluoto 3 nuclear power plant currently under construction. The investments are based on the Olkiluoto 3 financing plan, according to which the equity required for the investment is accumulated along with the progress of the project.

Research and development

There were no research and development expenses during the financial period (2016: €0.1 million; 2015: 0.3).

Personnel

The average number of employees working for the Group was 119 (2016: 149 and 2015: 199), including discontinued operations. The number of employees has decreased due to a reduction in condensing production, which has also caused the parent company of the Group to reorganise its operations. The Group's salaries and fees for the financial period, including discontinued operations, totalled €12.2 million (2016: 13.8; 2015: 16.3). The average age of permanent employees was 44 (45) years.

The average number of employees working for the parent company was 57 (in 2016: 65; 2015: 83). Salaries and fees for the financial year totalled €5.7 million (2016: 6.1; 2015: 6.8).

Environment

Environmental management systems certified in accordance with ISO 14001 are in use in the majority of Pohjolan Voima's production companies, which helps ensure the achievement of environmental objectives and the continuous improvement of operations. Certification in accordance with the new standard (ISO 14001:2015) continued in 2017. Most of our production companies are also committed to the energy efficiency systems ETJ+ or ISO 50001. In addition, the environmental management system of TVO (a joint venture of Pohjolan Voima) is EMAS-registered.

An environmental deviation took place at PVO-Vesivoima's Isohaara power plant, where a few dozen litres of oil spilled into the water due to a valve leak. The leak detected in the retaining earth dam of the Melo power plant in 2016 was repaired by grouting throughout the year. The repair of the dam continues. The repair work has not affected power generation operations at the power plant.

Water levels were regulated and hydropower plants operated in compliance with the permit conditions. In line with its obligations, PVO-Vesivoima stocked the Iijoki and Kemijoki waterways and the sea area with around 2.5 (2.7) million fry during the reporting period. Nearly all stocking plans were fulfilled.

In cooperation with the Iijoki region municipalities and other regional operators, PVO-Vesivoima has participated in a three-year waterway vision project called Iijoen otva. The project was launched by the Oulu Regional Council in late 2015. The main goals of the project include a shared vision on waterways, the promotion of the restoration of migrating fish, the protection of the Baltic Sea salmon population and the promotion of smaller development measures that will increase the river's value. As part of the Iijoen otva project, a spearhead project has been prepared to promote the revival of migratory fish. The budget of the spearhead project is more than €4 million, and the Finnish Government is committed to providing €2 million in funding for the project, as part of its Nature policy based on trust and fairness spearhead project. On 2 March 2017, PVO-Vesivoima and Metsähallitus filed a joint application with the Regional State Administrative Agency for Northern Finland for a water management permit to build fishways. The planning of the construction of the fishways started in November 2017.

In March, the Centre for Economic Development, Transport and the Environment for Lapland filed a change application with the Regional State Administrative Agency for Northern Finland concerning stocking and fish stock management obligations with regard to Kemijoki. In October, the centre filed a similar application concerning Iijoki. In addition to new requirements, these applications involve additions to current obligations. The Regional State Administrative Agency did not announce the applications during 2017.

All the thermal power plants operated by the Group fall within the sphere of the Emissions Trading Act. Carbon dioxide emissions from internally produced electricity and heat were 1.0 (1.6) million tonnes. The Notes to the Financial Statements only report the CO₂ emissions of the subsidiaries, which amounted to 0.5 (0.7) million tonnes. These figures do not include the emissions of 0.0 (0.0) million tonnes from PVO-Lämpövoima, which is reported as a discontinued operation. Other emissions into the air decreased. Sulphur dioxide emissions were 0.9 (1.4) thousand tonnes, nitrogen oxide emissions 1.8 (2.7) thousand tonnes and particle emissions 0.1 (0.1) thousand tonnes.

The new limits for emissions into the air, set out in the Industrial Emissions (IE) Directive, came into effect in Finland at the beginning of 2016. Some of Pohjolan Voima's facilities are included in the national IE Directive transition plan adopted by the European Commission on 10 March 2014. The transition plan provides some flexibility for the adoption of the stricter emission limits. The transition period is from 1 January 2016 to 30 June 2020. During this period, the total sulphur dioxide, nitrogen oxide and particle emissions in tonnes, as well as percentages, will be monitored.

The BAT conclusions related to the reference document on best available techniques for large combustion plants (LCP-BREF) were published on 17 August 2017. Power plants focusing on energy production are allowed four years to adjust their operations to the conclusions. The emission limits will be stricter in future environmental permits.

The Vaasa Administrative Court issued its decision on the complaint filed by Laanilan Voima concerning its environmental permit for 2015. Laanilan Voima appealed against the decision to the Supreme Administrative Court of Finland. The Vaasa Administrative Court issued its decision on the complaint filed by Kymin Voima concerning its environmental permit for 2015. The company did not appeal against the decision. The Supreme Administrative Court of Finland issued its decision on the complaint filed by Kaukaan Voima concerning its environmental permit for 2015. The court approved some of the company's requirements.

Pohjolan Voima and its subsidiaries, associated companies and joint ventures are not aware of any environmental liabilities that have not been covered. Pohjolan Voima's more detailed environmental information is published on the company's website at www.pohjolanvoima.fi. TVO provides information on the environmental issues related to nuclear power generation on its website at www.tvo.fi and in a separate corporate social responsibility report.

Risk management

Risk management aims to ensure the realisation of the strategy and the achievement of the business goals, as well as safeguarding continuity and disturbance-free operations. Risk management is carried out in line with the Group's risk management policy. The Group applies a decentralised risk management model: each subsidiary's Board of Directors and the parent company's units are responsible for the risks related to their operations, as well as their identification and analysis. Group-level risks are reported to the parent company's Executive Group and Board of Directors in accordance with the annual management calendar.

Risks that may jeopardise the attainment of objectives are estimated, and measures for their management are defined. The significance of risks is estimated as the sum of their likelihood of occurrence and impact.

All Pohjolan Voima companies are covered for risks of damage through measures related to maintenance, occupational safety, adequate training provided to the personnel and other necessary measures, as well as through insurance in line with the Group's insurance policy.

Key risks and uncertainty factors

The Group's most significant risks are related to the schedule and revenue generation capacity of the joint venture TVO's Olkiluoto 3 EPR project. The original plan was to begin commercial electricity production at the plant unit in late April 2009, but the completion of the plant unit has been delayed. In October 2017, TVO received an updated schedule from the plant supplier. It stated that regular electricity production would start in May 2019. The delay gives rise to additional costs and losses, for which TVO has demanded compensation from the turnkey plant supplier of the Olkiluoto 3 EPR project in an arbitration procedure in line with the rules of the International Chamber of Commerce (ICC). Risk related to planned completion refers to a situation where commercial operations cannot be started as planned, which causes additional costs.

A number of risk management measures related to the Olkiluoto 3 EPR project were carried out during 2017. These included implementing the Olkiluoto 3 management system and ensuring expertise and resources for Olkiluoto 3. Configuration management and production information systems were also developed. In addition, a third party carried out an organisational readiness review for TVO to ensure the company's readiness to operate three nuclear power plant units.

If the Olkiluoto 3 EPR project does not reach its intended capacity level, capacity factor or operating cost structure during the guarantee period, there is a risk that operating costs will increase in comparison with the target. This risk has been studied using various scenarios affecting the revenue generation capacity of OL3.

As the licence holder, TVO must ensure through risk management measures that, for example, comprehensive operational tests are carried out in the Olkiluoto 3 EPR plant unit before its nuclear test run. Automation, control room operations and operating instructions must be tested comprehensively by means of simulation. TVO ensures that experiences gained in the Taishan sister plant will be exploited in the thermal testing and nuclear commissioning of the Olkiluoto 3 EPR plant unit.

Changes in Group structure

Mussalon Voima Oy was registered as having dissolved through voluntary liquidation on 18 September 2017.

Finances

Pohjolan Voima operates on an at-cost basis. Shareholders pay the fixed costs in accordance with their ownership share, irrespective of whether they have used their capacity or energy share, as well as variable costs according to the energy supplied. As a result of this operating principle, it is irrelevant to present any financial key indicators to understand the company's business, financial status or result.

The targets and risks of Pohjolan Voima's financing operations have been defined in the financing policy approved by the parent company's Board of Directors. The financial risks of Pohjolan Voima's business operations are related to liquidity, market and credit risks. Financial risk management has been discussed in Note 3 to the consolidated financial statements. Financial risk management

The parent company has secured its liquidity with a €300 (300) million standby credit facility, of which €300 (300) million were available at the end of the year. Of the facility, €21 million will mature in June 2021, and the entire facility will mature in June 2022. In addition, the parent company signed a loan facility agreement for €70 million in June 2017. According to the agreement, the loan can be withdrawn until 30 June 2018, and it will mature in June 2020. For short-term funding, the Group was able to rely on domestic commercial paper programmes of €300 (300) million, of which €190 (190) million was unused. The Group's liquidity is good. Net interest-bearing liabilities at the end of the year stood at €787.87 (880.8) million. There were no liabilities involving an exchange rate risk.

At the end of the year, the Group's equity ratio was 40.4% (39.8%).

The consolidated result of continuing operations was €453.6 (507.0) million.

The operations of PVO-Lämpövoima, which was closed down in 2015, have been reported in the Group's financial statements as discontinued operations.

The consolidated result for the financial year was €1.1 (-17.1) million. The profitable result was mainly due to the divestment of a subsidiary.

Share capital and share issues

No share issues were carried out during the financial year.

The fourth and final instalment of the share capital increase issue related to the B2 share series, subscribed in June 2013 (4,107,143 shares at a subscription price of €230,000,008 directed to B2 series shareholders) was paid during the financial year.

The company acquired its K1 series shares in August 2017. The K1 shares were cancelled on 23 August 2017.

Table: Pohjolan Voima Oyj shareholders (general shareholding)

Shareholder	Shareholding, % 31.12.2016	Shareholding, % 31.12.2017
EPV Energia Ltd	5.462	5.489
Etelä-Suomen Voima Oy	1.434	1.482
Helen Ltd	0.598	0.619
Ilmarinen Mutual Pension Insurance Company	1.872	1.831
Kemira Oyj (incl. Neliapila pension fund)	4.984	5.06
Kokkolan Energia Oy	2.409	1.845
Kymppivoima Oy	5.765	5.907
Metsä Group (Metsäliitto Cooperative, Metsä Fibre, Metsä Board Oyj)	3.644	3.657
Myllykoski Oyj*	0.61	0.631
Oulun Energia Ltd	0.926	0.906
Outokumpu Oyj	0.098	0.096
Perhonjoki Ltd	2.183	2.167
Town of Pori	1.412	1.401
Rautaruukki Corporation	0.078	0.09
Stora Enso Oyj	15.544	15.608
UPM Energy Oy*	47.346	47.686
UPM Paper ENA Oy*	3.533	3.457
Vantaa Energy Ltd	0.221	0.229
Yara Suomi Oy (incl. pension fund)	1.881	1.84

* The company is part of the UPM-Kymmene Group.

Management

The Annual General Meeting of 22 March 2017 elected the following members to the Board of Directors: Tapio Korpeinen, Executive Vice President (UPM-Kymmene Corporation); Seppo Parvi, Chief Financial Officer (Stora Enso Oy); Jukka Hakkila, Group General Counsel (Kemira Oyj); Anders Renvall, Managing Director (Kymppivoima Oy); Tapani Sointu, Vice President (UPM-Kymmene Corporation); Esa Kaikkonen, Executive Vice President, Strategy (Metsä Group); Rami Vuola, President & CEO (EPV Energia Oy); Mikko Rintamäki, Managing Director (Kokkolan Energia Oy); and Juhani Järvelä, Managing Director (Oulun Energia Oy).

At the Board meeting on 22 March 2017, Tapio Korpeinen was elected Chairman of the Board and Seppo Parvi was elected Deputy Chairman. The Board of Directors convened 15 (15) times in 2017. Lauri Virkkunen, MSc (Tech.), MSc (Econ.), served as the company's President and CEO.

Major legal actions pending

In 2012, TVO filed a claim and a rejoinder in the arbitration procedure compliant with the rules of the International Chamber of Commerce (ICC) on the delay of the construction of the Olkiluoto 3 EPR and the related costs. In July 2015, TVO updated its estimated costs and losses that now amount to approximately €2.6 billion until December 2018, at which time regular electricity production should begin at the Olkiluoto 3 EPR according to the schedule provided by the plant supplier in September 2014.

The arbitration procedure began in December 2008 at the initiative of the plant supplier. The compensation demand updated by the plant supplier in April 2017 now amounts to approximately €3.59 billion. This sum is based on an updated analysis of the plant supplier regarding the events up until September 2014, and up until the end of December 2014 with regard to some claims. The sum includes interest in arrears (until the end of June 2017), around €1.58 billion in payment items postponed by TVO pursuant to the plant delivery contract, and about €132 million in lost profit as claimed by the plant supplier.

The court of arbitration issued a final and binding partial decision in November 2016. The partial decision concerned issues related to the early stages of the dispute, including the schedule, licensing and licensability, and system design. It covered many of the facts on which TVO bases its main claim against the plant supplier, as well as some of the key aspects on which the plant supplier's claims against TVO are based. In the partial decision, the majority of the issues

were decided in favour of TVO, and the majority of the plant supplier's claims regarding these issues were rejected. The monetary claims made by the parties were not addressed in the partial decision.

The court of arbitration also issued a final and binding partial decision in July 2017. The partial decision concerned the preparation, delivery, review and approval of the design and licensing documents related to the project. It covered key aspects on which the plant supplier's main claim against TVO is based, as well as some of the aspects on which TVO bases its claims against the plant supplier. In the partial decision, the majority of the issues were decided in favour of TVO, and the majority of the plant supplier's claims regarding these issues were rejected. Even though the partial decision did not address the monetary claims presented by the parties, it included a final rejection of the analysis method that the plant supplier used to justify its primary monetary claims against TVO.

The court of arbitration also issued a final and binding partial decision in November 2017. The decision concerned the implementation of the construction work and project management. It covered key aspects on which TVO bases its main claim against the plant supplier, as well as some of the aspects on which the plant supplier's claims against TVO are based. In the partial decision, many of the issues concerning the implementation of the construction work were decided in favour of TVO, and many of the issues raised by TVO with regard to the plant supplier's management were postponed until the next decision.

The arbitration proceedings are still in progress towards the final decision, in which the court of arbitration will determine the compensation obligations of the parties. TVO considers its claims to be well justified, and has found the plant supplier's claims to be without justification. This view is supported by the three significant partial decisions issued by the court of arbitration. The decisions also support TVO's view that its claims are stronger than the plant supplier's claims.

On 29 September 2016, TVO summoned Areva to an urgent interim proceeding before the President of the Commercial Court of Nanterre in order to obtain information about the restructuring of the French nuclear power industry and its potential effects on the performance of the Olkiluoto 3 plant delivery contract. Based on discussions between the parties, TVO withdrew from this action on 18 May 2017. The continuation of the discussions is expected to facilitate the completion of the Olkiluoto 3 EPR project and the start-up of the plant.

In January 2017, the European Commission concluded that French plans to grant a capital injection to Areva are in line with EU state aid rules. The European Commission approved the restructuring in May 2017. In September 2017, TVO filed a complaint with the General Court of the European Union concerning the European Commission's decision with regard to the state aid. TVO requires that the restructuring of the French nuclear power industry must not jeopardise the completion of the Olkiluoto 3 EPR project in line with the schedule specified by the plant supplier in the plant delivery contract.

By virtue of the plant delivery contract, the companies included in the plant supplier consortium (AREVA GmbH, AREVA NP SAS and Siemens AG) share the responsibility for meeting the contractual obligations.

No receivables or provisions have been recognised by TVO as a result of the demands presented during the arbitration proceedings.

In 1989, the predecessors of PVO-Lämpövoima, a wholly owned subsidiary of Pohjolan Voima, and Fortum Power and Heat Oy (FPH) signed a cooperation agreement that provides the parties with a permanent right to use certain power plant structures and equipment owned by the other party. The agreement concerns the Tahkoluoto coal power plant owned by PVO-Lämpövoima and the Meri-Pori coal power plant owned by FPH. Production operations at PVO-Lämpövoima's Tahkoluoto power plant ended in 2015. For this reason, PVO-Lämpövoima terminated the cooperation agreement in March 2017. FPH contested the termination. In August 2017, based on an application filed by FPH for a precautionary measure, the District Court of Helsinki ordered PVO-Lämpövoima to allow FPH to continue its use

of the structures and equipment of the Tahkoluoto power plant in accordance with the cooperation agreement. In September 2017, FPH started arbitration proceedings, in accordance with the arbitration rules of the Helsinki Region Chamber of Commerce, concerning PVO-Lämpövoima's termination of the cooperation agreement. At the same time, FPH filed a complaint with the District Court of Helsinki with regard to Pohjolan Voima Oyj, demanding that the permanent rights of use should also be valid in relation to Pohjolan Voima. PVO-Lämpövoima and Pohjolan Voima Oyj have refuted the claims presented by FPH.

Events after the end of the financial period

At its meeting on 25 January 2018, Pohjolan Voima's Board of Directors decided to propose to the extraordinary general meeting of 1 March 2018 that Pohjolan Voima approve the divestment of the Seinäjoki power plant, which is owned by the joint venture Vaskiluodon Voima Oy. If the meeting decides to approve the divestment, the transaction will be completed on 1 March 2018.

Outlook

On 14 December 2017, PVO-Vesivoima's Board of Directors decided to reorganise the company's hydropower management services. PVO-Vesivoima's power plants will be transferred to being run by the Tampere control room of UPM Energy Oy. The transfer will be carried out gradually during 2018 and will be completed by 1 January 2019.

TVO continues the implementation of the Olkiluoto 3 EPR nuclear power plant unit and the preparations for production operations. The thermal tests started in December 2017 will take several months. Once the tests have been completed successfully, Olkiluoto 3 will meet the requirements for an operating licence and will proceed towards nuclear commissioning. TVO continues to support the plant supplier in the completion of the project.

The concept and cost optimisation phase of Posiva Oy's final disposal project will continue until the end of 2018. The raise boring of the canister shaft is intended to begin in early 2018. A full-scale FISST test in ONKALO is intended to be carried out during 2018.

The ongoing energy transition is creating pressures for change. Electricity consumption will increasingly depend on the temperature, which will increase the need for peak power capacity. The production of weather-dependent wind and solar power continues to grow, which also increases the importance of flexible energy systems and adaptive production, and the risk of a shortage of power will not disappear in the near future.

To stabilise variation in production, consumption will be steered away from the periods of time when wind power is not available. With regard to distribution network pricing in Finland, the first capacity fees were introduced for consumers, with the amount of the fixed fee depending on the peak power capacity used. At the same time, the favourable economic development in Finland is increasing demand for electricity, and Finland will be more dependent on imported electricity. During its remaining term of office, the Finnish Government will focus on implementing the national energy and climate strategy confirmed by the parliament in summer 2017. At the same time, the political parties are preparing for the parliamentary elections in 2019.

The parliament continues to discuss the electricity subsidy system, paying special attention to ensuring technology neutrality and creating favourable conditions for cogeneration. The intense discussion about the role and approvability of hydropower in the electricity system also continues. The Government is preparing a law to prohibit the use of coal. It currently seems that the prohibition would not apply to exceptional situations or security of supply. The updating of the Nuclear Energy Act continues, and the investment activities of the State Nuclear Waste Management Fund may be further developed in conjunction with this.

The next elections to the European Parliament will be held in spring 2019, and the current European

Commission is no longer expected to create significant opportunities with regard to energy, climate and environmental policy. Decision-making in the EU is focusing on existing initiatives. The processing of the clean energy package issued by the European Commission in late 2016 continues. Key issues include the target levels for renewable energy and energy efficiency and sustainability criteria for biomass, as well as electricity market design. The involved institutions are expected to decide on these in early 2018. The final decision concerning the LULUCF Regulation, which affects forest use, is also expected to be issued in early 2018. It currently seems that the decision will provide Finland with sufficient leeway.

During 2018, the European Commission will evaluate the adequacy of the EU's targets in relation to the requirements of the Paris climate agreement. In addition, the Commission has started the renewal of the Water Framework Directive, and is expected to issue its proposal in 2019.

Proposal of the Board of Directors regarding the distribution of profits

On 31 December 2017, the parent company's distributable funds totalled €326,683,180.79, of which the net profit for the financial year accounted for €-2,186,262.01. The Board of Directors proposes to the Annual General Meeting that the loss for the financial year be transferred to the retained earnings account and that no dividends be distributed.

FINANCIAL STATEMENTS 2017 (IFRS)

Consolidated statement of comprehensive income

1 000 €	Note	1.1. - 31.12.2017	1.1. - 31.12.2016
Continuing operations			
Sales	6	453 603	507 020
Other operating income	7	21 968	10 114
Materials and services	8	-352 573	-400 716
Personnel expenses	9	-10 511	-11 340
Depreciation, amortisation and impairment	10	-39 484	-40 479
Other operating expenses	11,12	-52 016	-56 117
Share of (loss)/profit of associates and joint ventures	13	-9 424	-11 991
Operating profit or loss		11 563	-3 509
Finance income	14	4 329	3 145
Finance costs	14	-14 063	-15 879
Finance costs - net		-9 734	-12 734
Profit before income tax		1 829	-16 243
Income tax expense	15	838	0
Profit for the year from continuing operations		2 667	-16 243
Discontinued operations			
Profit/loss from discontinued operations		-1 570	-859
Profit for the year		1 097	-17 102
Other comprehensive income:			
Items, that may be reclassified later to profit or loss			
Share of other comprehensive income of associates			
Cash flow hedging of the sold joint venture			
Changes in the fair value of available-for-sale financial assets	18	-8	-217
Cash flow hedging	18	-5 368	-4 380
Other comprehensive income for the year		-5 376	-4 597
Total comprehensive income for the year		-4 279	-21 699
Profit attributable to:			
Owners of the parent		-10 392	-17 491
Non-controlling interest		11 489	389
		1 097	-17 102
Total comprehensive income attributable to:			
Owners of the parent		-15 768	-22 088
Non-controlling interest		11 489	389
		-4 279	-21 699

Consolidated balance sheet

1 000 €	Note	31.12.2017	31.12.2016
ASSETS			
Non-current assets			
Intangible assets	16	283 364	283 920
Property, plant and equipment	17	531 077	564 446
Investments in associated companies and joint ventures	18	744 184	758 984
Available-for-sale financial assets	19	505	586
Loans and other receivables	20	385 962	324 291
Non-current assets total		1 945 092	1 932 227
Current assets			
Inventories	22	5 190	8 040
Trade and other receivables	20	86 452	152 097
Cash and cash equivalents	21	43 857	50 821
Current assets total		135 499	210 958
Assets held for sale	23	8 845	23 254
Total assets		2 089 436	2 166 439
Equity			
Equity attributable to owners of the parent			
Share capital	24	65 293	64 108
Share issue		0	49 305
Share premium		216 822	220 292
Reserve for invested non-restricted equity		328 869	286 190
Revaluation reserve		-2 466	2 910
Retained earnings		192 792	198 039
Total		801 310	820 844
Non-controlling interests		42 197	41 035
Total equity		843 507	861 879
LIABILITIES			
Non-current liabilities			
Provisions	25	4 491	3 889
Deferred tax liabilities	26	0	843
Borrowings	27	1 040 611	1 084 562
Other non-current liabilities	27,29	2 993	3 626
Non-current liabilities total		1 048 095	1 092 920
Current liabilities			
Borrowings	27	140 126	138 339
Trade and other payables	28	57 708	72 742
Current liabilities total		197 834	211 081
Liabilities related to assets held for sale	23	0	559
Total liabilities		1 245 929	1 304 560
Total equity and liabilities		2 089 436	2 166 439

CONSOLIDATED STATEMENT OF CASH FLOWS

1 000 €	Note	2017	2016
Cash flows from operating activities			
Profit for the year		2 667	-16 243
Adjustments to the profit for the year	5	42 563	65 571
Change in net working capital	5	-447	41 446
Interest paid and other financial expenses		-14 768	-15 219
Interest received		2 278	2 996
Income tax paid		36	-57
Net cash generated from operating activities		32 329	78 494
Cash flows from investing activities			
Purchases of intangible assets and property, plant and equipment (PPE)	16,17	-6 458	-9 760
Proceeds from sales of intangible assets and PPE	16,17	6 738	25 718
Proceeds from sales of available-for-sale financial assets	16,17	0	0
Proceeds from sale of subsidiaries	4	16 685	7 645
Equity refunds received		0	0
Loan repayments	20	2 264	1 941
Loans granted	20	-60 231	-4
Proceeds (+) or repayments (-) of short term investments		0	-73
Dividends received		8	2
Net cash used in investing activities		-40 994	25 469
Cash flows from financing activities			
Proceeds from issuance of ordinary shares	24	49 305	0
Equity refunds received	23,24	0	-70 913
Acquisition of own shares	23,24	-296	0
Proceeds from borrowings	27,23	510 000	23 223
Repayments of borrowings	27,23	-538 493	-22 520
Repayment of finance leases	27,23	-13 649	-13 572
Proceeds (+) or repayments (-) of current liabilities	20,21	-27	-39 534
Dividends paid		-15 304	-2 530
Net cash used in financing activities		-8 464	-125 846
Net (decrease)/increase in cash and cash equivalents		-17 129	-21 883
Cash and cash equivalents at beginning of year		52 866	77 155
Change in cash and cash equivalents		-17 129	-21 883
Cash and cash equivalents of subsidiaries sold		-1 852	-2 406
Cash and cash equivalents at end of year, continuing operations		33 885	52 866
Cash and cash equivalents, discontinued operations		9 972	-2 045
Cash and cash equivalents at end of year	21	43 857	50 821

Consolidated statement of changes in equity

1 000 €	Note	Share capital	Share issue	Share premium	Fair value reserve	Reserve for invested non-restricted equity	Equity loans	Retained earnings	Equity attributable to owners of the parent	Equity attributable to non-controlling interest	Total equity
Balance at 1.1.2016		64 108	49 305	288 683	7 507	297 894	0	206 347	913 844	43 175	957 019
Comprehensive income											
Profit or loss								-17 491	-17 491	389	-17 102
Other comprehensive income:											
Cash flow hedges					-4 380				-4 380		-4 380
Changes in the fair value of available-for-sale financial assets					-217				-217		-217
Total comprehensive income for the year		0	0	0	-4 597	0	0	-17 491	-22 088	389	-21 699
Transactions with owners											
Transfer to retained earnings	24					-9 183	9 183	0			0
Transfer to reserve for invested non-restricted equity				-18 391		18 391		0			0
Refund of reserves	24			-50 000		-20 912		-70 912			-70 912
Transactions with owners total		0	0	-68 391	0	-11 704	0	9 183	-70 912	0	-70 912
Dividends to non-controlling interest								0		-2 529	-2 529
Balance at 31.12.2016		64 108	49 305	220 292	2 910	286 190	0	198 039	820 844	41 035	861 879
Balance at 1.1.2017		64 108	49 305	220 292	2 910	286 190	0	198 039	820 844	41 035	861 879
Comprehensive income											
Profit or loss								-10 392	-10 392	11 489	1 097
Other comprehensive income:											
Cash flow hedges					-5 368				-5 368		-5 368
Changes in the fair value of available-for-sale financial assets					-8				-8		-8
Total comprehensive income for the year		0	0	0	-5 376	0	0	-10 392	-15 768	11 489	-4 279
Transactions with owners											
Proceeds from shares issued	24	1 481	-49 305			47 824		0			0
Transfer to retained earnings	24					-5 145	5 145	0			0
Non-controlling interest of a liquidated and sold group companies								0		4 977	4 977
Adjustment relating to former business combinations of a company dissolved				-3 470				-3 470			-3 470
Acquisition and annulment of own shares		-296						-296			-296
Transactions with owners total		1 185	-49 305	-3 470	0	42 679	0	5 145	-3 766	4 977	1 211
Dividends to non-controlling interest								0		-15 304	-15 304
Balance at 31.12.2017		65 293	0	216 822	-2 466	328 869	0	192 792	801 310	42 197	843 506

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1. Notes to the financial statements

General information

Pohjolan Voima Oyj (PVO) is a Finnish public limited liability company with domicile in Helsinki, Finland. Pohjolan Voima Oyj and its subsidiaries form together the Pohjolan Voima Group.

Pohjolan Voima Group is a privately owned energy group. The production capacity of the Group consists of 26 power plants in 18 different locations. Energy is generated by hydropower, nuclear power and thermal power.

Copies of the consolidated financial statements can be obtained from www.pohjolanvoima.fi or from PVO's head offices, Töölönkatu 4, 00100 Helsinki, Finland.

These consolidated financial statements were approved for issue by PVO's Board of Directors on 1 March 2018, however, according to Finnish Limited Liability Companies Act the shareholders can edit or reject these financial statements at the annual general meeting.

Basis of preparation

The consolidated financial statements of Pohjolan Voima Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union. The IAS and IFRS standards as well as and IFRIC and SIC Interpretations valid as at 31 December 2017 have been used in preparation of the financial statements. The consolidated financial statements also comply with the Finnish Accounting Act and Limited Liability Companies Act.

All amounts in the consolidated financial statements are presented in thousands of Euros.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting principles. The areas involving higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in section "critical judgements in applying the entity's accounting policies and critical estimations and assumptions".

Cost-price principle

According to the Articles of Association of PVO, the Group supplies electricity and heat at cost price to the shareholders which means that it delivers the electricity it has produces or procured to its shareholders in proportion to their shareholdings in each series. The operating model of PVO is also called the "Mankala principle". The name is derived from a ruling issued by the Supreme Administrative Court in the 1960s, constituting a precedent. In this ruling, the shareholders of a company called Oy Mankala Ab were found not to have received taxable income when Mankala generated and supplied them with electricity at a price lower than the market price and the shareholders covered the company's costs on the basis of its Articles of Association.

Each of the shareholders of each series bears their share of the variable and fixed annual costs as specified in the company's legal documents. Parent company administrative costs are covered by a fixed yearly fee as defined by the company's legal documents.

In accordance with PVO's Articles of Association, each shareholder's share of the liability for the annual costs will always be limited to the amount corresponding to the proportion of its shareholding to all shares belonging to

the same series, and another shareholder's failure will not increase the shareholder's liability based on shareholding. The shareholders are liable for costs specified in the Articles of Association paragraph 4.

Consolidation

Subsidiaries

The consolidated financial statements include Pohjolan Voima Oyj and all its subsidiaries. Subsidiaries are those entities over which the Group has control. The Group has control over an entity if it has power over the entity; it is exposed or has rights to variable returns from its involvement with the entity and has the ability to use its power to affect the amount of its returns from the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

The Group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets. The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Group's share of the identifiable net assets acquired, is recorded as goodwill. If this is less than the fair value of the subsidiary acquired in the case of a bargain purchase, the difference is recognised directly in the statement of comprehensive income.

Inter-company transactions, balances, distributions of profit and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless they relate to an impairment.

Associated companies and joint arrangements

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Joint arrangements are either joint operations or joint ventures. A joint venture is a contractual joint arrangement whereby the Group together with one or more parties has undertaken an economic activity that is subject to joint control and whereby The Group with other parties has rights to the net assets of the joint arrangement.

Investments in associates and joint ventures are accounted for using the equity method of accounting and are initially recognised at cost. The Group's share of its associates' and joint ventures' post-acquisition profits or losses is recognised in the statement of comprehensive income, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. The Group's investment in associates and joint ventures includes goodwill identified at acquisition, net of any accumulated impairment losses. When the Group's share of losses in an associate or joint venture equals or exceeds its interest in the associate or joint venture, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate or joint venture. Unrealised gains on transactions between the Group and its associates or joint ventures are eliminated to the extent of the Group's interest in the associates or joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment.

of the asset transferred. Accounting policies of associates and joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

Non-controlling interests

The profit or loss for the period attributable to owners of the parent and non-controlling interest is disclosed in the statement of comprehensive income. Non-controlling interests are identified separately from the equity of the owners of the parent company in the statement of changes in equity.

The Group treats transactions with non-controlling interests as transactions with equity owners of the Group. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Group ceases to have control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This means that any amounts previously recognised in other comprehensive income are recognized as part of the gain or loss on sale.

Foreign currency translation

The functional and presentation currency of the parent company and all of the subsidiaries, associates and joint ventures is the euro. Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Assets and liabilities denominated in foreign currencies are translated at the closing rate at the date of that balance sheet.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of comprehensive income, except when deferred in other comprehensive income as qualifying cash flow hedges and qualifying net investment hedges. Foreign exchange gains and losses relating to operations are included on the relevant line items above operating income. Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of comprehensive income within 'finance income or cost'. Translation differences on non-monetary financial assets and liabilities held at cost are translated using the exchange rates prevailing at the dates of the transactions. There are no non-monetary financial assets or liabilities held at fair value denominated in foreign currencies.

Revenue recognition

The Group's energy operations are based on cost price. Sales of expert services relating to energy operations are not based on cost price. Revenues are based on the consideration received for delivered energy or provided services. All revenues are presented net of value-added taxes. Revenues are recognised, as follows:

Energy revenues and other revenues

Revenue on sales of energy is divided into variable and fixed charge. Revenue on sales of energy concerning variable charge is recognised at the time of delivery. Revenue is recognised based on the delivered quantities. Both the variable and fixed charge is invoiced and recognized in turnover monthly and are paid retrospectively

on the 24th of next month. Service revenue mainly consists of administration and operating service revenues. Revenue for services is recognised in the financial period when services have been rendered and when the control of the service transfers to a customer.

Other income

Revenue from activities outside the normal operations is reported in Other income. This includes recurring items such as rental income and non-recurring items such as gains on sale of property, plant and equipment. Rental income is recognised on a straight-line basis over the period of the lease agreement. The gain on sale of property, plant and equipment is recognised when the significant risks and rewards of ownership have been transferred to the buyer.

Research and development costs

Research and development costs are expensed as incurred and included in other operating expenses, except when the development costs are expected to generate probable future economic benefits. In this case the costs are recorded as intangible assets and amortised over their useful lives. There are no development costs currently in the consolidated financial statements that fulfil the criteria for recognition as an intangible asset.

Interest income and dividends

Interest income is recognised using the effective interest method. Dividends are recorded when the right to receive payment is established.

Borrowing costs

Borrowing costs are recognised as an expense in the period in which they are incurred, unless they are directly attributable to construction of a power plant, in which case they are capitalized as a part of the cost of the asset.

Income taxes

PVO delivers electricity and heating to its shareholders at cost price. The shareholders are delivered a proportionate share of the energy generated or procured by PVO according to their proportionate ownership in the various series of shares. Based on the cost based pricing the Group does not pay any taxes on its energy related operations, therefore the Group does recognise any deferred tax assets or liabilities on these operations.

Income taxes and deferred taxes are recognised, on the other hand, on the services provided by the Group.

The tax expense for the period comprises current tax, relating to the current period and any adjustments made to taxes for the previous financial period, and deferred taxes. The current income tax charge is calculated on the basis of the tax laws enacted. The taxes for the current period are adjusted if necessary by the taxes related to the previous period.

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill or from the undistributed profits of the subsidiaries if it is not probable that the temporary difference will reverse in the foreseeable

future. The most significant temporary differences for the Group arise from the depreciation of property, plant and equipment, losses carried forward and the fair valuation of assets at acquisition.

Deferred income tax is determined using tax rates (and laws) that have been enacted by the balance sheet date. Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Intangible assets

Intangible assets are carried at historical cost, less government grants received, accumulated amortisation and impairment. Historical cost includes all costs directly attributable to the acquisition of the intangible asset. Intangible assets with a finite useful life are amortised using the straight-line method over the following estimated useful lives:

Computer software	3-10 years
Other intangible assets	5-10 years

No amortisation is recorded for goodwill and other intangible assets with infinite useful lives, instead these assets are tested annually for impairment. Intangible assets having infinite useful lives are water rights that have an infinite useful life based on the Water Act and certain utilisation rights for transmission roads and land based on the Act on the Redemption of Immoveable Property and Special Rights.

Emission allowances

Carbon dioxide (CO₂) emission allowances are included in the intangible assets. Emission allowances are recognised at cost, whether received free of charge or acquired from a third party. Emission allowances received free of charge are, in other words, recorded at zero. A short-term liability is recognised to cover the obligation to return emission allowances. To the extent that Group already holds allowances to meet the obligation the liability is measured at the carrying amount of those allowances. Any shortfall of allowances held over the obligation is valued at the current market value of allowances. Emission right and the related liability are derecognised when they are returned to cover the obligation or when they are sold. Emission allowances are not amortised. The cost of the provision is recognised in the statement of comprehensive income within materials and services. Gains from sales of emission rights are presented in Other income.

Property, plant and equipment

Property, plant and equipment is stated at historical cost less government grants received, less accumulated depreciation and any accumulated impairment. Historical cost includes expenditure that is directly attributable to the acquisition of the assets. Borrowing costs directly attributable to the acquisition or construction of assets that necessarily take a substantial amount of time to get ready for their intended use are capitalised as part of the cost of the related asset. Additionally, the cost of an item of property, plant and equipment includes the discounted estimated cost of its dismantlement, removal or restoration.

Land and water areas are not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost or revalued amounts to their residual values over their estimated useful lives. The costs for dismantling a power plant are depreciated over the estimated useful life of the specific power plant.

Depreciation is calculated using the straight-line method based on the estimated useful lives, as follows:

Hydropower plant buildings, structures and machinery	40-80 years
Co-generation (electricity and heating) power plant buildings, structures and machinery	4-35 years
Transmission network	10-45 years
Other buildings and structures	10-25 years
Other machinery and equipment	3-20 years
Other tangible assets	3-40 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate to reflect the changes in estimated future economic benefits associated with the assets'.

If the asset consists of different components, which have different estimated useful lives, each component is recognised as a separate asset. Replaced components are capitalized and any possible remaining carrying value of the replaced component is derecognised. In other cases subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the asset will flow to the Group and the cost of the item can be measured reliably.

Annual repairs and maintenance are charged to the statement of comprehensive income during the financial period in which they are incurred. Power plant modernization and improvements are recognised in the asset's carrying amount or recognised as a separate asset, as appropriate.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised within other operating income or other operating expenses in the statement of comprehensive income.

Depreciation on assets classified as held for sale, according to IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations", is ceased.

Government Grants

Grants from the government, are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants relating to the purchase of property, plant and equipment are deducted from the acquisition cost of the asset and are recognised as income by reducing the depreciation charge of the asset they relate to. Government grants relating to costs are deferred and recognised in the statement of comprehensive income over the period necessary to match them with the costs that they are intended to compensate. These grants are presented in other operating income.

Inventories

Inventories are stated at cost. Cost is determined using the first-in, first-out (FIFO) method. The cost of inventory comprises raw materials and other direct costs. Inventories are always stated at cost as the energy generation operations are conducted based on cost price and therefore the cost of inventory is always equal to its' net realizable value.

Leases

Leases, Group as lessee

Finance leasing

Property, plant and equipment leases in which a significant portion of the risks and rewards of ownership are transferred by the lessor to the Group are classified as finance leases. Finance leases are capitalised at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments. The property, plant and equipment acquired under finance leases are depreciated over the shorter of the useful life of the asset and the lease term. The corresponding rental obligations, net of finance charges, are included in other current and non-current liabilities. Each lease payment is allocated between the liability and finance charges. The interest element of the finance cost is charged to the statement of comprehensive income over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

If a sale and leaseback transaction results in a finance lease, any excess of sales proceeds over the carrying amount shall not be immediately recognised as income by a seller-lessee. Instead, it shall be deferred and amortised over the lease term. If the leaseback is an operating lease, and the lease payments and the sale price are at fair value, there has in effect been a normal sale transaction and any profit or loss is recognised immediately. IAS 39 is applied for the collateralized financial liabilities that are resulted from sale and leaseback transactions that do not contain a lease in substance. The liability is amortised at cost, each lease payment is allocated between the liability and finance charges according to the effective interest method.

Operating leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases are charged to the statement of comprehensive income on a straight-line basis over the period of the lease.

Rental income from operating lease contracts, where the Group acts as the lessor, are recorded in other operating income on a straight line basis over the period of the lease.

Leases, the Group as lessor

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases are charged to the statement of comprehensive income on a straight-line basis over the period of the lease.

Rental income from operating lease contracts, where the Group acts as the lessor, are recorded in other operating income on a straight line basis over the period of the lease.

Impairment of non-financial assets

The individual assets' carrying values are reviewed at each closing date to determine whether there is any indication of impairment. If there is an indication of impairment the asset is tested for impairment. Goodwill, assets that have an indefinite useful life and intangible assets in progress are not subject to amortisation and are tested annually for impairment regardless of there is indication of impairment or not. Impairment for assets excluding goodwill is assessed at the cash-generating unit (CGU) level, which is the smallest identifiable Group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or Groups of assets. Goodwill is tested for impairment at the level at which it is monitored by management which may be an individual CGU or Groups of CGUs

but is not tested at a level higher than an operating segment.

An asset's recoverable amount is the higher of a cash-generating unit's fair value less costs to sell and its value in use. Value in use is the estimated discounted future cash flows expected to be provided by the asset or Group of assets. The discount rates used are pre-tax and reflect current market assessments of the time value of money and specific risks relating to the relevant asset or Group of assets.

Where the carrying value of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Impairment is recognised immediately in the statement of comprehensive income. Impairment arising from a goodwill impairment test is allocated first to goodwill and any excess thereafter rateably over the other assets in the CGU. Assets other than goodwill that suffered an impairment charge are reviewed for possible reversal of the impairment if the estimates used in the calculation of the recoverable amount have changed. A reversal of an impairment loss shall not exceed the carrying amount (net of amortisation or depreciation) that would have been determined had no impairment loss been recognised for the asset in prior years. Impairment losses on goodwill are never reversed.

Financial assets and financial liabilities

Purchases and sales of financial assets and liabilities are recognised on the trade-date at fair value. Financial assets are derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

The Group classifies its financial assets in the following categories: financial assets at fair value through profit or loss, loans and receivables, and available for sale financial assets. The classification is determined at initial recognition and depends on the purpose for which the financial assets were acquired.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets held for trading or initially designated in this category. Derivatives are categorised as held for trading unless they are designated as hedges. All derivatives held by the Group are classified as financial assets at fair value through profit or loss, as hedge accounting is not applied by the Group. Derivatives in this category are classified as current assets if expected to be settled within 12 months; otherwise, they are classified as non-current. When the derivatives have a negative value they are classified as financial liabilities held for trading. Liabilities in this category are classified as current liabilities if expected to be settled within 12 months; otherwise, they are classified as non-current. Gains or losses arising from changes in the fair value of the 'financial assets at fair value through profit or loss' category are presented in the statement of comprehensive income in the period in which they arise.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and not held for sale. The Group's loans and receivables comprise 'trade and loan receivables'. Loans and receivables are subsequently carried at amortised cost using the effective interest method. They are included in current assets, except for maturities greater than 12 months after the end of the reporting period. These are classified as non-current assets. Trade receivables are recorded at cost which corresponds to their fair value. Loans granted, which have a maturity date, are measured at amortised cost using the effective interest method. Loans lacking a maturity date are valued at cost.

Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless the investment matures or management intends to dispose of it within 12 months of the end of the reporting period. Available-for-sale financial assets are initially recognised at fair value plus transaction costs and are subsequently valued at fair value. Unquoted securities for which fair value cannot be measured reliably are measured at cost. Changes in the unrealized fair value of available-for-sale financial assets are recognised in other comprehensive income. Changes in fair value are recognised in the statement of comprehensive income when the asset is sold or when it has been impaired. The available-for-sale financial assets held by the Group comprise unquoted securities valued at cost. There is no active market for the securities and PVO has no intention to dispose of these securities.

Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term highly liquid investments with original maturities of three months or less.

Impairment of financial assets

The Group assesses, at the end of each reporting period, whether there is objective evidence that a financial asset or Group of financial assets is impaired. A financial asset or a Group of financial assets is impaired and impairment losses are incurred in the statement of comprehensive income only if there is objective evidence of impairment. If, in a subsequent period, the fair value of an available-for-sale financial asset increases, the impairment loss of an equity instrument is not reversed through the consolidated statement of comprehensive income. The Group recognises an impairment of trade receivables if there is objective evidence that the receivable will not be paid in full.

Financial liabilities

Financial liabilities are recognised initially at fair value, net of transaction costs incurred. Financial liabilities are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the statement of comprehensive income over the period of the borrowings using the effective interest method.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw-down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

Derivative instruments are recognised as financial liabilities at fair value through profit or loss. These are recognised similarly as financial assets at fair value through profit or loss. They are included in non-current liabilities unless the liability is settled within 12 months of the end of the reporting period.

Derivative instruments

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is hedge accounted. Group has not applied for hedge accounting in 2017 and 2016 and has recognized the gains and losses resulted from fair value measurement through income statement.

Teollisuuden Voima Oyj (TVO), a joint venture of the Group, is consolidated using the equity method, see Associates companies and joint arrangements under the Notes to the Financial statements. TVO uses derivative instruments to hedge the foreign currency exchange rate risk in fuel purchases as well as the foreign currency risk and interest rate risk in borrowings denominated in foreign currencies. Hedge accounting according to IAS 39 is applied to foreign currency forward contracts and cross currency swap contracts hedging foreign currency risk in procurement contracts of uranium. In addition hedge accounting is applied to some of the interest rate swap contracts entered into, hedging the fluctuations in cash flows of interest payments on borrowings. TVO documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in the hedging transactions are highly effective in offsetting the cash flows of the hedged item.

TVO applies both cash flow and fair value hedge accounting. The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income and presented in the revaluation reserve. The gain or loss on the fair value of the hedge instruments relating to the ineffective portion is recognised immediately in the statement of comprehensive income within finance income and costs, unless they are capitalized as a part of an investment in a power plant. Changes in fair values accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss. When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in other comprehensive income at that time are recognised in profit or loss during the maturity of the hedging instrument. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately recognised in the income statement.

TVO applies fair value hedge accounting for hedging fixed interest risk on borrowings that are quoted. The gain or loss relating to the effective portion of interest derivatives hedging fixed rate borrowings is recognised in the profit or loss within finance costs. The carrying amount of hedged borrowings and fair values of derivatives hedging them are considered part of interest bearing liabilities and assets. If the hedge no longer meets the criteria for hedge accounting, the adjustments to the carrying amount of a hedged borrowing is amortised to profit or loss over the period to maturity.

TVO presents fair value changes relating to non-hedge accounted interest rate options and certain interest rate swaps within finance costs as regards those are not capitalised in the cost of the power plant under construction.

Other companies in the Group have derivative instruments that do not fulfil the hedge accounting criteria according to IAS 39. Examples of these instruments are some interest rate swap agreements which have been used to exchange floating rate borrowings into fixed rate borrowings and foreign currency forward contracts hedging the foreign currency risk in fuel purchases. Derivatives are recorded at fair value in the assets or liabilities. Changes in the fair values of foreign currency forwards and interest rate derivative instruments are recorded through profit and loss within finance income and costs. Derivatives are classified as current or non-current assets or liabilities depending on their maturity date.

Employee benefits

Pensions for the personnel in the Group have been arranged through an external pension insurance company. The Finnish (TyEL) pension system, as well as, the voluntary pension insurances are recognised as defined contribution plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Payments made to the defined contribution plans are recognised as expenses in the period in which they were incurred. Defined benefit plans are plans that are not defined contribution plans. The Group does not have

any defined contribution plans.

Provisions and contingent liabilities

Provisions for environmental restoration, asset retirement obligations and legal claims are recognised when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense. Where some or all of the expenditure required to settle a provision is expected to be reimbursed by another party, the reimbursement is recognised when, and only when, it is virtually certain that reimbursement will be received. Provisions are not recognised for operating costs.

A contingent liability is disclosed when there is a possible obligation that arises from external events and whose existence is only confirmed by one or more doubtful future events or when there is an obligation that is not recognised as a liability or provision because it is not probable that an outflow of resources will be required or the amount of the obligation cannot be reliably estimated. Contingent liabilities are disclosed in the notes to the financial statements.

Environmental provisions

Environmental provisions are recognised, based on current interpretation of environmental laws and regulations, when it is probable that a present obligation has arisen and the amount of such liability can be reliably estimated.

Environmental expenditures resulting from the remediation of an existing condition caused by past operations, and which do contribute to current or future revenues, are expensed as incurred.

Accrued expenses related to the handling of ashes

Group companies may have, in temporary storage, ashes generated from the power plant operations, which are subject to waste tax. These ashes may have an alternative utilisation, an alternative utilisation is being sought or there is no alternative utilisation which will result in the ashes being transported to a waste disposal site. Financial statements include an accrued expense, representing the best estimate for the costs of the handling of the ashes held in temporary storage at the end of the reporting period.

Asset retirement obligations

An asset retirement obligation is recognised either when there is a contractual or a legal obligation and the obligation amount and timing can be reliably estimated. The asset retirement obligation is recognised as part of the cost of an item of property and plant when the asset is put in service or when contamination occurs. The costs are depreciated over the remainder of the asset's useful life.

Assets and liabilities relating to nuclear waste management

The treatment of the nuclear waste management liability has a material effect on the profit and loss of Teollisuuden Voima Oyj (TVO). The nuclear waste management liability based on the Nuclear Energy Act is covered by a contribution to the National Waste Management Fund. The liability covers all future costs for the handling of the

existing nuclear waste, including the decommissioning of the nuclear power plants and final disposal of the spent nuclear fuel.

In the consolidated financial statements of TVO the share of the funds in the National Waste Management Fund, is presented as part of non-current assets according to IFRIC 5. The nuclear waste management liability is presented in provisions, within non-current liabilities. Present value of the nuclear waste management liability is calculated by discounting the cash flows based on the planned estimated future operations and their costs taking into account the already realized operations.

The initial present value of the provision for decommissioning of the nuclear power plant is included in the capitalized investment cost of the power plant. The initial present value is adjusted according to subsequent planned future changes. The cost for decommissioning of the plant is depreciated over the estimated useful life of the power plant.

The provisions made for the disposal of spent nuclear fuel at the end of the reporting period, covers all the future cost for final disposal. The cost of the final disposal of the spent nuclear fuel is recognised over the time the nuclear fuel is being used. Any planned changes are recognised immediately in the statement of comprehensive income, based on the spent nuclear fuel at the end of the reporting period.

The time value of money when discounting the nuclear waste management liability is recognised by recording the interest expense in the statement of comprehensive income.

Share Capital

PVO has 14 different series of shares. Each series of shares entitle their owner to the energy generated by a specific subsidiary, associate or joint venture. Each shareholder is entitled to the proportionate share of the energy according to their proportionate ownership of a specific series of shares.

Proceeds received at the inception of the Company and subsequent issue of share capital have been recorded in the share capital, share premium account and after 1 September 2006 also in the reserve for invested non-restricted equity.

Earnings per share

Earnings per share are not presented as the Group operates at cost price. The ordinary shares of Pohjolan Voima Oyj are not traded in a public market.

Equity loans to shareholders

Equity loans to shareholders are classified as equity instruments and recognized initially at fair value including transaction costs. The equity loans do not have a maturity date, and the debtor can repay the loan at will in one or several tranches. The debtor's Board of Directors has discretion over the coupon interest payments for the loan. Unpaid interest does not accumulate to the subsequent periods. The equity loan is unsecured and is subordinate to all other forms of debt instruments but senior to the company's other equity instruments.

The interest for the equity loans is recognized as a liability only after entity has decided to pay the interest. The relating interest expense is recognized on a cash basis directly in retained earnings and not through the consolidated income statement.

Assets held for sale and discontinued operations

Assets are classified as assets held for sale and stated at the lower of carrying amount and fair value less costs to sell, if their carrying amount is recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. Assets are not depreciated.

A discontinued operation is a component of an entity that either has been disposed of or is classified as held for sale and:

1. Represents either a separate major line of business or a geographical area of operations
2. Is a part of a single co-ordinated plans to dispose of a separate major line of business or geographical area of operations, or
3. Is a subsidiary acquired exclusively with a view to resale and the disposal involves loss of control.

Profit of discontinued operations is presented as a single amount on the face of the statement of comprehensive income. Assets held for sale, disposal groups, any cumulative income or expense recognized in the other comprehensive income relating to a non-current asset classified as held for sale as well liabilities relating to disposal groups are presented separately in the face of the consolidated balance sheet.

Segment reporting

Segment reporting according to IFRS 8 applies only to individual financial statements of an entity whose debt or equity instruments are traded in a public market or an entity that is in the process of filing, its financial statements with a securities commission or other regulatory organization for the purpose of issuing any class of instruments in a public market. Pohjolan Voima Oyj's shares are not publicly traded and it has not issued any debt or equity instruments.

Implementation of interpretations and amendments to New and revised IFRS standards

In preparing these financial statements, the group has followed the same accounting policies as in the annual financial statements for 2016 except for the following amendments to existing standards which have been applied for from 1 January 2017 on.

- IAS 12 Income taxes (amendment) – recognition of deferred tax assets for unrealized losses. The amendment has no impact on the consolidated financial statement.
- IAS 7 Financial instruments: disclosures (amendment) – entities will be required to explain changes in their liabilities arising from financing activities as well as non-cash changes. The Group has prepared a new note in the consolidated financial statements disclosing the reconciliation of net liabilities.

The Group will adopt the following standards, interpretations and amendments to existing standards and interpretations in its 2018 financial statements or later. Based on initial assessment, Group estimates that these have no impact on the consolidated financial statements, unless separately below stated.

- IFRS 9 Financial instruments - replaces the multiple classification and measurement models in IAS 39 and it will bring changes to classification and measurement of financial assets their impairment assessment hedge accounting. A debt instrument is measured at amortised cost only if the objective of the business model is to hold the financial asset for the collection of the contractual cash flows, and the contractual cash flows under the instrument solely represent payments of principal and interest. All other debt and equity instruments, including investments in complex debt instruments and equity investments, must be recognised at fair value. All fair value movements on financial assets are taken through the statement of profit or loss, except for equity investments that are not held for trading, which may be recorded in the statement of profit or loss or in reserves (without subsequent recycling to profit or loss). The Group has loan and other receivables and limited amount of available-for-sale assets Based on the analysis prepared by the Group the implementation of the standard will not have material impact on the classification of financial assets as loan and other receivables are currently recognized at amortised cost and according to the Group's business model financials assets are held and contractual cash flows collected. Assets available-for-sale are classified currently at fair value, if such value is available. Impairment of financial assets will be based on expected credit loss method. The Group will apply for simplified provision matrix in recognizing the credit losses of accounts receivable as annual credit losses have been limited and there is no material financing component included in the accounts receivable. Thus expected credit losses do not have material impact. There will be no impact on the Group's accounting for financial liabilities as the new requirements only affect the accounting for financial liabilities that are designated at fair value through profit or loss and the Group does not have any such liabilities. The new hedge accounting rules) align hedge accounting more closely with common risk management practices. The Group will not implement hedge accounting.
- IFRS 15 Revenue from contracts with customers - The IASB has issued a new standard for the recognition of revenue. This will replace IAS 18 which covers contracts for goods and services and IAS 11 which covers construction contracts. The new standard is based on the principle that revenue is recognised when control of a good or service transfers to a customer - so the notion of control replaces the existing notion of risks and rewards. A new five-step process must be applied before revenue can be recognised:
 - identify contracts with customers
 - identify the separate performance obligation
 - determine the transaction price of the contract
 - allocate the transaction price to each of the separate performance obligations, and
 - recognise the revenue as each performance obligation is satisfied.
 Based on the analysis prepared by the Group the implementation of the standard does not have material impact in revenue recognition. Turnover of the Group mainly consists of energy revenue, which will still be recognized monthly based on delivery (see Cost-price principle).
- IFRS 16 Leases - almost all leases will be recognized on the balance sheet as the distinction between operating and financing leases is removed. Under the new standard, an asset (the right to use the leased item) and a financial liability to pay rentals are recognized. The only exceptions are short-term and low-value leases. The standard will affect primarily the accounting for the group's operating leases. As at the reporting date, the group has non-cancellable operating lease commitments of 2,7 million euros, see note 32. The group estimates that approximately 10-30% of these relate to payments for short-term and low value leases which will be recognised on a straight-line basis as an expense in profit or loss. However, the group has not yet assessed what other adjustments, if any, are necessary for example because of the change in the definition of the lease term and of extension and termination options. It is therefore not yet possible to estimate the amount of right-of-use assets and lease liabilities that will have to be recognised on adoption of the new standard and how this may affect the group's profit or loss and classification of cash flows going forward. The standard must be applied for financial years commencing on or after 1 January 2019.
- Annual improvements to IFRS 2014-2016* – clarify IFRS 12 disclosure requirements as well IAS 28 investment-by-investment choice for measuring.
- IFRIC 22 Foreign currency transactions and advance considerations*
- IFRIC 23 Uncertainty over income tax treatments*
- IFRS 9 (amendment)* - prepayment features with negative compensation
- IAS 28 (amendment)* - long-term interests in associates and joint ventures
- Annual improvements 2015-2017* - contains amendments to IFRS 3 Business Combinations, IFRS 11 Joint Arrangements, IAS 12 Income Taxes and IAS 23 Borrowing costs.

* Standard, interpretation or amendment is not yet endorsed by EU.

2 Critical judgements in applying the entity's accounting policies and critical estimations and assumptions

The Group management makes judgements in the preparation of the financial statements relating to the selection and application of the accounting principles. These decisions relate specifically to those areas where the effective IFRS-standards allow alternative methods of recording, valuation or presentation.

The estimates and assumptions made by management in the preparation of the consolidated financial statements are based on the best knowledge at hand at year end. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results and the detailed background information are followed by management together with the business units using both internal and external sources of information. Changes to the estimates and assumptions are recognised in the financial period in which changes occur and all the future financial periods.

Legal obligations

Management judgement is required to estimate timing and valuation of the legal obligations. A provision is recorded when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Due to inherent uncertain nature of litigation, the actual losses may differ significantly from the originally estimated provision.

Impairment testing

Impairment testing is carried out annually for goodwill and for intangible assets with indefinite useful lives. Impairment testing for other assets is performed when there is an indication that the asset might be impaired. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations are based on estimated future cash flows received from the use of the asset or the sale of the asset.

Pohjolan Voima operations are based on the cost-price method ('Mankala principle'). According to the company's legal documents the shareholders of the Company are invoiced a price for the energy received which covers fixed and variable expenses of the operations. When testing if the assets are impaired based on the value-in-use, the discounted cash flows, correspond, except for a few exceptions, to the recoverable amount and therefore usually there is no impairment recorded.

Environmental provision

Operations of the Group are regulated by a number of laws and regulations. The Group is in compliance with all existing environmental regulations. The Group has recorded, for the industry customary, provisions for environment protection expenses to cover its legal obligations.

3 FINANCIAL RISK MANAGEMENT

The financial risk management in Pohjolan Voima Group is carried out centrally by the parent company treasury department under policies approved by the Board of Directors. The Group's activities expose it to a variety of financial risks: liquidity risk, market risk and credit risk.

The objective of the financing function is to ensure the existence of sufficient funds for operative decision making and to promote the low cost of electricity through its decisions.

Derivatives are entered into only for hedging purposes. Pohjolan Voima does not apply hedge accounting under IFRS.

Liquidity and refinancing risks

Liquidity and refinancing risks relate to the impact on the company's profit and loss and cash flows, if the company is unable to secure sufficient funding for its operations. In addition to sufficient liquid funds and committed credit facilities Pohjolan Voima Group seeks to reduce refinancing risk by diversifying the maturity of its loans as well as sources for its funding.

In accordance with Pohjolan Voima Group's financing policy, the maturity of long-term debt and refinancing is agreed so that a maximum of 25% of the outstanding debt will fall due within the next 12 months. This principle is not applied on the loans granted by the State Nuclear Waste Management Fund.

Liquidity risk is significantly reduced by the fact that Pohjolan Voima Group invoices shareholders in accordance with the Articles of Association, the monthly fixed and variable costs.

Free liquidity is invested prudently and productively in instruments with a duration of up to 12 months. The objective is to diversify investments and these are chosen so that a secondary market liquidity is also ensured in adverse conditions and so that most of the investments can be realized at a low cost.

Pohjolan Voima Group mainly uses the domestic commercial paper programs amounting to 300 million Euros in order to ensure short-term financing. As at 31 December 2017 110 million Euros out of the commercial paper program was in use (31 December 2016 110 million Euros).

In addition to liquid assets Pohjolan Voima Group's liquidity is secured by 300 million Euros revolving credit facility. 21 million of the revolving credit facility will mature in June 2021 and the facility in total in June 2022. The loan facility was fully undrawn as per 31 December 2017 (as well as per 31 December 2016). Further, Pohjolan Voima signed a total of 70 million Euros credit facility agreement. According to the agreement the loan can be withdrawn until 30 June 2018 and it will mature in June 2020. The loan has two options to prolong the facility.

Pohjolan Voima Group's financial arrangements do not include any covenants.

The following table presents a maturity analysis on loan agreements. The figures are cash based and interest flows are based on the interest rates prevailing at the closing date. Differences between the balance sheet items and the debt amounts below arise from the transaction costs that have been accrued according to the effective interest method in the balance sheet. Transaction costs for loan arrangements are not included in the cash flows as these have been paid at the time of the signing of the agreements.

Undiscounted cash flows of financial liabilities

2017							Total	Balance sheet
1 000 €	2018	2019	2020	2021	2022-			
Loans from financial institutions *	-6 881	-31 881	-338	-266	-12 027	-655 801	-655 801	
Finance costs **	-6 761	-6 867	131	881	-386	-23 604		
Loan from the State Nuclear Waste Management Fund (TVO) ***			-6 414	-3 176		-196 285	-196 285	
Finance costs	-2 802	-2 277	-2 277	-2 277	-2 277	-11 910	-11 910	
Finance lease liabilities	-20 751	-56 066	222	-4 523	-47 594	-216 156	-216 156	
Finance costs	-700	-573	-464	-378	-1 306	-3 421		
Commercial papers	-109 782					-109 782	-109 782	
Finance costs	-218					-218		
Pension liabilities	-2 712					-2 712	-2 712	
Finance costs	-31					-31		
Interest rate derivatives	-1 249	-1 602	-2 137	-2 127	-5 492	-12 607	-3 001	
			-436	-279				
Total	-151 887	-99 266	645	362	-265 367	-1 232 527		

* Repayments to be made in 2018 are included in current liabilities.

** In addition to interest expenses, finance costs also include a commitment fee.

*** The loan from the State Nuclear Waste Management Fund does not have an actual date of maturity, and therefore it is presented as a loan with a loan term of over 5 years. According to the section 52 of the Nuclear Energy Act Teollisuuden Voima Oyj is entitled to borrow from State Nuclear Waste Management Fund against securing guarantees the amount which can not be larger than 75 per cent of the latest confirmed TVO's share in the Fund. TVO has borrowed this amount from the Fund and has granted a loan with the corresponding amount to Pohjolan Voima. The loan is annually renewed. Pohjolan Voima has issued a bank guarantee to the Fund as security. Pohjolan Voima has received a committed bank guarantee facility of 196 million Euros which matures in 30 April 2019.

Undiscounted cash flows of financial liabilities

2016						Total	Balance sheet
1 000 €	2017	2018	2019	2020	2021-		
Loans from financial institutions *	-12 170	-132 756	-28	-93	-27 846	-294 535	-294 535
Finance costs **	-2 554	-1 874	006	756	-708	-8 036	
Loan from the State Nuclear Waste Management Fund (TVO) ***			-1 666	-1 234		-583 334	-583 334
Finance costs	-4 331	-5 775	-5 775	-5 775	-5 775	-27 431	-27 431
Finance lease liabilities	-13 649	-20 751	-56	-87	-52 117	-229 805	-229 801
Finance costs	-879	-823	-671	-503	-1 684	-4 560	
Commercial papers	-109 808					-109 808	-109 808
Finance costs	-192					-192	
Pension liabilities	-2 712	-2 712				-5 424	-5 424
Finance costs	-71	-31				-102	
Interest rate derivatives	-2 368	-1 142	-1 575	-1 916	-7 298	-14 298	-4 478
			-93	-190			
Total	-148 734	-165 864	759	406	-678 761	-1 277 524	

* Repayments to be made in 2017 are included in current liabilities.

** In addition to interest expenses, finance costs also include a commitment fee.

*** The loan from the State Nuclear Waste Management Fund does not have an actual date of maturity, and therefore it is presented as a loan with a loan term of over 5 years. According to the section 52 of the Nuclear Energy Act Teollisuuden Voima Oyj is entitled to borrow from State Nuclear Waste Management Fund against securing guarantees the amount which can not be larger than 75 per cent of the latest confirmed TVO's share in the Fund. TVO has borrowed this amount from the Fund and has granted a loan with the corresponding amount to Pohjolan Voima. The loan is annually renewed. Pohjolan Voima has issued a bank guarantee to the Fund as security.

Market risk

Interest Rate Risk

Changes in interest rates and margins on the interest-bearing receivables and liabilities create an interest rate risk. The objective of the interest rate risk management in Pohjolan Voima, is to protect the Group against the increase of interest expenses caused by the increase in the reference interest rates. In accordance with the financing policy of the Group, the interest rate risk is monitored by means of duration of the loan portfolio for each series of shares. The duration of the loan portfolios of the parent company and subsidiaries are set at the level where the electricity price sensitivity to changes in interest rates is on an acceptable level considering the individual risk-bearing capacity of each series of shares. Interest derivatives are used in the management of the duration.

As per 31 December 2017 the increase or decrease of one percentage point in the interest rate would affect the result of the year by approximately +11.2/-16.7 (31 December 2016: +6.9/-13.6) million Euros. The impact includes in addition to the change of interest expense and income the change in the fair value of interest hedging instruments. The simulation calculates the effect of one percentage point change for all liabilities with variable interest rates as well as for interest income and expenses of receivables from the next interest fixing date until the end of the financial year. The financing structure is assumed to be unchanged and the short-term loans maturing during the financial year are assumed to be prolonged until the end of the year by using the new higher interest rate.

Currency Risk

Both short-term and long-term loans are mainly denominated in euros. Other than the euro-denominated borrowings are hedged latest at the time when the loan is drawn. All Pohjolan Voima Group's loans were euro-denominated in 2017 and 2016.

The Group is exposed to the currency risk primarily in possible coal purchases. Since the production activities of PVL-Lämpövoima Oy ceased in 2015, coal purchases were not made in 2017 or 2016.

Currency swaps, forward contracts and options can be used for the currency risk hedging. Pohjolan Voima has not used any hedging instruments for the currency- or coal procurement risks in 2017 and 2016.

Credit risk

Credit or counterparty risk is arise from the possibility that a customer or a financial counterparty does not fulfil its commitments. Commercial trade receivables, investments and receivables based on derivative financial instruments expose the company to credit risk. When counterparty banks are selected, only banks with high credit ratings qualify. Derivative financial agreements are entered into only with leading banks and financial institutions. All counterparties are monitored for their payment behaviour and credit worthiness. Pohjolan Voima recognised impairment of 0,5 thousand euros (2016: 3 thousand euros) on trade receivables during the reporting period. Pohjolan Voima sells electricity and heat to its shareholders. Pohjolan Voima operates based on cost price according to its Articles of Association (Mankala principle), which decreases the credit risk related to the trade receivables significantly. There are no significant trade receivables past due in the Group.

Capital risk management

Capital is defined as the equity attributable to the owners of the parent company consisting of share capital, share premium, reserve for invested non-restricted equity, revaluation reserve, retained earnings and equity loans, as well as the equity attributable to the non-controlling interest. There are no external capital requirements it needs to adhere to.

Sufficient equity based financing in the Group enables use of diversified financing types from different sources.

There is a moderate variation of the equity to assets ratio of the Group depending on the investment cycles. Shareholders of each series of shares according to their proportionate ownership are responsible for the equity share of the investments.

Pohjolan Voima follows the equity on assets ratio, which is presented below.

	2017	2016
Equity on assets ratio (%) (IFRS, Group) *	40	40
* Equity on assets ratio%	= 100 x	$\frac{\text{Shareholders' equity}}{\text{Balance sheet total}}$

4 SOLD NON-CURRENT ASSETS AND BUSINESS COMBINATIONS

Sold non-current assets

The shares of PVO-Alueverkko Oy, owned by the group company Powest Oy, were sold and the title to the shares was passed 31 January 2017.

Pohjolan Voima and Kokkolan Energia Oy signed 29 December 2016 sales and purchase agreement to sell Pohjolan Voima's subsidiary's, Kokkolan Voima Oy, all shares to Kokkolan Energia. The agreement came to force and the title to the shares was passed 31 December 2016.

Assets and liabilities of sold companies	2017	2016
Property, plant and equipment	192	0
Intangible assets	4 339	0
Non-current receivables	0	19 974
Inventories	0	0
Trade and other receivables	651	3 398
Cash and cash equivalents	1 852	2 406
Total assets	7 035	25 778
Non-controlling interests	0	0
Provisions	0	0
Borrowings	0	16 373
Trade and other payables	1 028	1 112
Total liabilities	1 028	17 485
Net assets sold	6 007	8 293
Gain on disposal	10 597	-647
Total consideration	16 604	7 646
Cash consideration received	16 604	7 646
Cash and equivalents disposed of	-1 852	-2 406
Cash inflow arising from disposal	14 752	5 240

Business combinations

There were no business combinations in 2017 or in 2016.

5 NOTES TO THE STATEMENT OF CASH FLOWS

Adjustments to profit or loss for the year (1 000 €)	2017	2016
Depreciation and amortisation	39 484	40 480
Increase/decrease in fair value of derivatives	-1 913	1 762
Income taxes	-838	0
Gains (+) or losses (-) from disposal of non-current assets	-15 241	365
Finance costs - net	11 647	10 972
Share of (loss)/profit of associates and joint ventures	9 424	11 992
Total	42 563	65 571
Change in net working capital	2017	2016
Increase (-) or decrease (+) in non-interest-bearing receivables	6 912	11 134
Increase (-) or decrease (+) in inventories	3 107	6 653
Increase (+) or decrease (-) in current non-interest-bearing liabilities	-11 068	23 739
Change in provisions	602	-80
Total	-447	41 446

6 SALES

1 000 €	2017	2016
Sales of electricity produced	293 484	319 178
Sales of heat produced	132 635	156 823
Sales of purchased electricity	19 482	21 559
Other sales	8 002	9 461
Total	453 603	507 020
Electricity delivered to shareholders (GWh)		
Electricity produced	11 397	12 828
Heat produced	3 960	5 068
Purchased electricity	533	545

PVO's electricity purchases are determined by the electricity required by the shareholders. In 2017, Pohjolan Voima Group's total electricity purchases from continuing operations were 11.9 (13.4) TWh. The Group's electricity generation accounted for 11.4 (12.8) TWh, of which the parent company delivered to its shareholders 10.9 (12.4) TWh. Subsidiaries supplied 0.5 (0.5) TWh to other owners. Purchases from continuing operations from the Nordic electricity market, were 0.5 (0.5) TWh and sales were 0.4 (0.5) TWh. Heat deliveries were 4.5 (5.5) TWh.

Other sales consist primarily of sales of emission allowances as well as network and management services.

7 OTHER OPERATING INCOME

1 000 €	2017	2016
Rental income	596	721
Gain on sale of property, plant and equipment as well as subsidiaries and joint ventures	17 431	292
Government grants	3	267
Electricity production subsidies	1 994	2 644
Other income	1 944	6 190
Total	21 968	10 114

8 MATERIALS AND SERVICES

1 000 €	2017	2016
Fuels	89 528	107 160
Change in inventories	2 790	5 760
Materials and services	1 944	2 087
Emissions allowances - carbon dioxide	762	1 224
Energy purchased; Nordic electricity market	21 166	23 012
Energy purchased; Associates and Joint ventures	226 123	246 987
Energy purchased; other	4 252	8 111
External services	6 007	6 375
Total	352 573	400 716

Purchases of fuel consist of peat and bio fuel purchases, which are used for electricity and heat production.

Energy purchases from associates and joint ventures include purchases according to the ownership share in Teollisuuden Voima Oyj, Oy Alholmens Kraft Ab and Vaskiluodon Voima Oy.

9 PERSONNEL EXPENSES

Personnel-related expenses

1 000 €	2017	2016
Wages and salaries		
Board members and CEO	1 475	1 415
Other wages and salaries	7 287	7 890
Pension expenses - defined contribution	1 492	1 701
Other personnel expenses	257	334
Total	10 511	11 340

Average number of personnel

	2017	2016
Salaried employees	88	104
Wage-earners	31	45
Total	119	149

Above average number of personnel includes personnel of discontinued operations in total 18 in 2017 (2016: 34).

Out of this salaried employees amount to 12 (2016: 18) and wage-earners 6 (2016: 16).

10 Depreciation, amortisation and impairment

1 000 €	2017	2016
Amortisation of intangible assets		
Intangible rights	33	21
Other intangible assets	1 137	1 289
Total	1 170	1 309
Depreciation of property, plant and equipment		
Buildings and constructions	4 969	4 979
Machinery and equipment	30 949	31 784
Other assets	2 396	2 321
Total	38 314	39 084
Impairments		
Other intangible assets	0	86
Buildings and constructions	0	0
Machinery and equipment	0	0
	0	86
Depreciation, amortisation and impairment total	39 484	40 479

11 OTHER OPERATING EXPENSES

1 000 €	2017	2016
Repair, servicing and maintenance services	11 560	14 769
Real estate taxes	6 167	6 311
Rents	1 402	1 301
Operation services	16 366	18 111
Other expenses	16 522	15 625
Total	52 016	56 117

Auditor's fees

1 000 €	2017	2016
Audit fees	169	185
Auditor's mandatory opinions	2	2
Tax advisory	2	0
Other services	43	18
Total	216	206

12 RESEARCH & DEVELOPMENT

There was no research and development recognised as an expense during the period in 2017 (0.1 million euros in 2016).

13 SHARE OF (LOSS)/PROFIT OF ASSOCIATES AND JOINT VENTURES

1 000 €	2017	2016
Länsi-Suomen Voima Oy	1	0
Oy Alholmens Kraft Ab	424	-156
Tahkoluodon Polttoöljy Oy	0	0
Teollisuuden Voima Oyj	-9 737	-10 627
Tomiolaakson Voima Oy	47	-116
Vaskiluodon Voima Oy	-169	-1 095
Voimalohi Oy	10	2
Total	-9 424	-11 992

Investments in associates and joint ventures are disclosed in note 18

14 FINANCE INCOME AND COSTS

1 000 €	2017	2016
Dividend income on available-for-sale investments	8	2
Interest income on loans and receivables	2 408	3 011
Derivative financial instruments (hedge accounting is not applied)		
Fair value gains	1 913	0
Foreign exchange gains	0	132
Other finance income	0	0
Finance income total	4 329	3 145
Interest expense capitalised on qualifying assets	10 376	10 184
Derivative financial instruments (hedge accounting is not applied)		
Fair value losses	0	1 762
Foreign exchange losses	0	94
Other finance cost	3 686	3 839
Finance costs total	14 063	15 879
Total finance income and costs	-9 734	-12 734

15 INCOME TAX

1 000 €	2017	2016
Taxes for the financial year	5	9
Taxes for the previous financial years	1	1
Change in deferred tax liability	-843	-10
Total	-838	0

PVO delivers electricity and heating to its shareholders at cost price. According to the cost based pricing the Group does not pay any taxes on its energy related operations, therefore the Group does not recognise any deferred tax assets or liabilities on these operations. Income taxes and deferred taxes are recognised, on the other hand, on the services provided by the Group.

Change in deferred tax:

1 000 €	2017	2016
Accumulated depreciation difference 1.1.	843	853
Charged/(credited) to the statement of comprehensive income	-843	-10
Accumulated depreciation difference 31.12.	0	843

Differences between income taxes recognised in the consolidated income statement and the tax rate in Finland as presented in the following table:

1 000 €	2017	2016
Result before income tax	1 829	-16 243
Tax based on Finnish tax rate 20%	-366	3 249
Unrecognised tax losses	-381	-1 221
Tax-free income	3 711	0
Share of profits and losses of associates and joint ventures	-1 844	-2 114
Unrecognised deferred taxes due to cost price principle	-1 108	39
Tax losses excluding the deferred tax asset for previous periods	825	48
Income taxes recognised in consolidated income statement	838	0

16 INTANGIBLE ASSETS

1 000 €	Emission allowances - carbon dioxide	Intangible rights	Other intangible assets	Total
Cost or valuation at 1.1.2017	1 205	280 964	17 871	300 040
Additions	699	56	198	953
Disposals	-1 131	-11	-759	-1 901
Reclassifications		149	651	800
At 31.12.2017	773	281 158	17 961	299 892
Accumulated amortisation and impairment 1.1.2017	0	1 286	14 835	16 120
Disposals			-763	-763
Amortisation for the period		33	1 137	1 170
Accumulated amortisation and impairment 31.12.2017	0	1 319	15 209	16 528
Closing net book amount 31.12.2017	773	279 839	2 752	283 364
Closing net book amount 31.12.2016	1 205	279 678	3 037	283 920

1 000 €	Emission allowances - carbon dioxide	Intangible rights	Other intangible assets	Total
Cost or valuation at 1.1.2016	3 445	280 984	19 244	303 673
Additions	1 119	1		1 120
Disposals	-3 359	-21	-185	-3 565
Reclassifications			358	358
Transferred to assets held for sale			-1 546	-1 546
At 31.12.2016	1 205	280 964	17 871	300 040
Accumulated amortisation and impairment 1.1.2016	0	1 265	14 139	15 403
Disposals			-174	-174
Amortisation for the period		21	1 374	1 395
Amortisation and impairment, discontinued operations			0	0
Accumulated amortisation and impairment 31.12.2016	0	1 286	14 835	16 120
Closing net book amount 31.12.2016	1 205	279 678	3 037	283 920
Closing net book amount 31.12.2015	3 445	279 719	5 106	288 270

The intangible assets include the right to produce hydro power totalling 265 million Euros and and the compensation amounting to 14.4 million Euros paid in 2013, 2014 and 2015 for the water area usage permanent right. The right to produce hydro power and the water area usage permanent right are intangible assets, with indefinite useful lives. Impairment testing for these assets is performed annually. Impairment test have not resulted in any need for impairment, because the future generated cash flows exceed the carrying value of the asset. The estimate for right to produce hydro power and the water area usage permanent right which are based on the future amount of electricity produced multiplied by the price for electricity (excluding fixed costs) exceeds the carrying value of the intangible assets.

There is no goodwill included within intangible rights and other intangible assets.

17 PROPERTY, PLANT AND EQUIPMENT

1 000 €	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Prepayments	Total
Cost or valuation at 1.1.2017	33 849	130 173	724 940	83 066	5 510	977 539
Additions	2		1 489	656	4 117	6 264
Disposals	-27	-1 637	-14 188	-406		-16 258
Reclassifications		494	5 662	152	-7 108	-800
Cost or valuation 31.12.2017	33 824	129 030	717 903	83 468	2 519	966 745
Accumulated depreciation 1.1.2017	0	46 246	322 773	44 074	0	413 093
Disposals and reclassifications		-1 504	-14 191	-406		-16 101
Depreciation for the period		4 969	30 949	2 396		38 314
Amortisation and impairment, discontinued operations				362		362
Accumulated depreciation 31.12.2017	0	49 711	339 531	46 426	0	435 668
Net book amount 31.12.2017	33 824	79 319	378 373	37 041	2 519	531 077
Net book amount 31.12.2016	33 849	83 927	402 168	38 991	5 510	564 446

1 000 €	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Prepayments	Total
Cost or valuation at 1.1.2016	34 963	130 526	724 213	82 582	5 546	977 831
Additions			2 188		9 037	11 225
Disposals	-73	-70	-62		-2 745	-2 950
Reclassifications	-162	27	5 621	484	-6 328	-358
Transferred to assets held for sale	-879	-310	-7 020			-8 209
Cost or valuation 31.12.2016	33 849	130 173	724 940	83 066	5 510	977 539
Accumulated depreciation 1.1.2016	0	41 638	293 217	41 209	0	376 064
Disposals		-63	-62			-125
Depreciation for the period		4 979	31 784	2 321		39 084
Amortisation and impairment, discontinued operations				544		544
Transferred to assets held for sale		-308	-2 166			-2 474
Accumulated depreciation 31.12.2016	0	46 246	322 773	44 074	0	413 093
Net book amount 31.12.2016	33 849	83 927	402 168	38 991	5 510	564 446
Net book amount 31.12.2015	34 963	88 888	430 997	41 372	5 546	601 767

In 2017 the asset retirement obligation of one landfill was revised. Further, the lifetime of one landfill was revised.

Management has assessed that no other indications of impairment exists.

FINANCE LEASE AGREEMENTS

Amounts of finance leased assets included in property, plant and equipment:

1 000 €	Machinery and equipment
31.12.2017	
Cost	325 376
Disposals and reclassifications	0
Accumulated depreciation	-125 669
Net book amount	199 707
31.12.2016	
Cost	295 681
Disposals and reclassifications	24 596
Accumulated depreciation	-106 393
Net book amount	213 884

Borrowing costs included in the cost of property, plant and equipment:

1 000 €	Buildings and constructions	Machinery and equipment	Other tangible assets	Total
Cost or valuation at 1.1.2017	460	15 642	111	16 213
Additions				0
Disposals				0
Cost or valuation at 31.12.2017	460	15 642	111	16 213
Accumulated depreciation 1.1.2017	252	6 304	63	6 620
Disposals				0
Depreciation for the period	18	615	5	638
Accumulated depreciation 31.12.2017	270	6 919	68	7 258
Net book amount 31.12.2017	190	8 722	43	8 955
Net book amount 31.12.2016	208	9 337	48	9 593

1 000 €	Buildings and constructions	Machinery and equipment	Other tangible assets	Total
Cost or valuation at 1.1.2016	594	16 175	111	16 880
Additions				0
Disposals	-133	-534		-667
Cost or valuation at 31.12.2016	460	15 642	111	16 213
Accumulated depreciation 1.1.2016	365	6 197	59	6 622
Disposals	-133	-534		-667
Depreciation for the period	20	641	4	665
Accumulated depreciation 31.12.2016	252	6 304	63	6 620
Net book amount 31.12.2016	208	9 337	48	9 593
Net book amount 31.12.2015	228	9 978	52	10 258

The borrowing costs related to the construction of power plants are capitalized as part of the acquisition cost of the asset and depreciated over the useful life of the asset.

18 INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

1 000 €	2017	2016
At 1 January	758 984	775 572
Share of profit	-9 424	-11 991
Other comprehensive income	-5 376	-4 597
At 31 December	744 184	758 984

Associates and Joint Ventures

Company, domicile	Interest held %		Book value	
	2017	2016	2017	2016
Associates				
Oy Alholmens Kraft Ab, Pietarsaari	49,90%	49,90%	18 503	18 079
Länsi-Suomen Voima Oy, Harjavalta	19,90%	19,90%	33 651	33 651
Tahkoluodon Polttoöljy Oy, Pori	32,00%	32,00%	0	0
Tomiolaakson Voima Oy, Ylitornio	50,00%	50,00%	1 915	1 867
			54 069	53 597
Joint Ventures				
Teollisuuden Voima Oyj, Helsinki	58,47%	58,47%	676 511	691 624
Vaskiluodon Voima Oy, Vaasa	50,00%	50,00%	13 413	13 582
Voimalohi Oy, Kemi	50,00%	50,00%	191	181
			690 115	705 387
Associates and joint ventures total			744 184	758 984

Pohjolan Voima accounts for Teollisuuden Voima Oyj as a joint venture in the IFRS consolidated financial statements. Pohjolan Voima Oyj owns 58.47 % of the share capital of Teollisuuden Voima Oyj at 31 December 2017 (31 December 2016: 58,47%). Based on the Articles of Association and other company records which dictate the basis for the decision making and governance of the company, as well as, Pohjolan Voima Oyj's right to appoint board members, the Group has assessed that Teollisuuden Voima Oyj should be accounted for as a joint venture.

Teollisuuden Voima Oyj has investment commitments totalling 792 (864) million Euros.

Goodwill on acquisition of Länsi-Suomen Voima Oy is included in the investments in the associates totalling 28 million Euros at 31 December 2017 (31 December 2016: 28 million Euros). Impairment testing of the goodwill is performed annually. Länsi-Suomen Voima Oy owns the hydropower plant located in Harjavalta at Kokemäenjoki. Pohjolan Voima has assessed that the fair value of the investment in the associate exceeds its book value at 31.12.2017.

Information on the associated companies and joint ventures of the Group, and their aggregate assets and liabilities, revenues and profit or loss for the year is presented below. All associates and joint ventures are unlisted companies.

1 000 €	Assets	Liabilities	Revenue	Profit/ loss (-)
2017				
Oy Alholmens Kraft Ab	110 595	73 247	41 696	-225
Länsi-Suomen Voima Oy	42 893	15 542	3 245	-25
Tahkoluodon Polttoöljy Oy	8	0	0	-1
Teollisuuden Voima Oyj	7 373 542	5 706 848	320 928	-9 431
Tomiolaakson Voima Oy	7 874	4 043	1 679	21
Vaskiluodon Voima Oy	129 388	96 679	78 352	-42
Voimalohi Oy	1 595	1 204	4 071	21
Total	7 665 895	5 897 563	449 971	-9 682

1 000 €	Assets	Liabilities	Revenue	Profit/ loss (-)
2016				
Oy Alholmens Kraft Ab	119 317	83 088	44 273	-347
Länsi-Suomen Voima Oy	43 688	16 327	2 401	3
Tahkoluodon Polttoöljy Oy	8	0	0	0
Teollisuuden Voima Oyj	7 952 228	6 362 976	343 398	-10 533
Tomioalaakson Voima Oy	7 952	4 216	1 357	-46
Vaskiluodon Voima Oy	136 838	103 875	95 314	-455
Voimalohi Oy	1 506	1 136	3 902	3
Total	8 261 537	6 571 618	490 644	-11 375

Related-party transactions - transactions with associates and joint ventures

1 000 €	2017	2016
Sales to associates and joint ventures	3 378	4 156
Purchases from associates and joint ventures	224 743	243 403
Receivables from associates and joint ventures	411 191	357 533
Liabilities to associates and joint ventures	221 868	614 072
	2017	2016
Personnel employed by associates and joint ventures in average	928	912

Summary of the financial information on joint ventures

Teollisuuden Voima Oyj is the most significant joint venture of Pohjolan Voima. Teollisuuden Voima Oyj is a public limited company, the shares of which do not have a quoted market price. Teollisuuden Voima is consolidated in the Group's financial statements using the equity method.

	TVO Group 2017	TVO Group 2016
Summary of the balance sheet		
Current		
Cash and cash equivalents	140 239	312 236
Other current assets	313 133	505 989
Current assets in total	453 372	818 225
Financial liabilities (excl. trade payables)	-392 540	-309 394
Other current liabilities (incl. trade payables)	-211 463	-210 110
Current liabilities in total	-604 003	-519 504
Non-current		
Assets	6 920 170	7 134 003
Financial liabilities	-5 102 845	-5 843 472
Non-current assets in total	-5 102 845	-5 843 472
Net assets	1 666 694	1 589 252
Summary of the statement of comprehensive income	2017	2016
Sales	320 928	343 398
Depreciation	-54 385	-54 807
Finance income	12 239	16 189
Finance costs	-42 881	-30 042
Profit/loss from continuing operations before income tax	-9 433	-10 532
Income tax expense	2	-1
Profit/loss from continuing operations after income tax	-9 431	-10 533
Other comprehensive income	-9 195	-7 861
Profit/loss from continuing operations	-18 626	-18 394
Summary of the financial information	2017	2016
Net assets at 1 January	1 589 252	1 611 999
Profit/loss for the year	-18 626	-18 394
The change and interest of subordinated shareholder loans	96 068	-4 353
Net assets at the end of the period	1 666 694	1 589 252
Holdings in joint ventures	4 602	3 312
Book value	4 602	3 312

19 AVAILABLE-FOR-SALE FINANCIAL ASSETS

1 000 €	2017	2016
Investments in non-listed securities	505	586
Total	505	586

Available-for-sale financial assets consist mainly of vacation cottages used by personnel totalling 0.5 million Euros (2016: 0.6).

20 LOANS AND OTHER RECEIVABLES

Non-current loans and other receivables

1 000 €	2017	2016
Loans to associates and joint ventures	348 921	288 690
Finance lease receivables	0	0
Other non-current receivables	37 041	35 601
Total	385 962	324 291

Loans to associates and joint ventures include a loan receivable from Teollisuuden Voima Oyj of 348.9 (2016: 288.7) million Euros and a loan receivable from Tomionlaakson Voima Oy of 0 (0.1) million Euros. There is no material credit risk related to the non-current loans and other receivables. The fair value of the receivables has been presented in Note 30 Fair values of financial assets.

Trade and other receivables

1 000 €	2017	2016
Trade receivables	47 539	60 777
Pledged cash deposits	138	182
Interest-bearing receivables	73	208
Finance lease receivables	0	2 129
Derivatives	0	0
Share issue receivables	36 869	37 974
Prepayments and accrued income	0	49 305
Other current receivables	1 833	1 523
Total	86 452	152 097

Carrying values of trade receivables and other receivables approximates their fair value.

Prepayments and accrued income:

1 000 €	2017	2016
Prepayments, energy purchases	22 809	23 623
Indirect taxes	7 816	7 997
Other	6 244	6 353
Total	36 869	37 974

The Group recorded credit losses of 0.5 thousand Euros in 2017 (2016: 3,1 thousand euros) on trade receivables or other receivables. The Group had no material outstanding receivables as per 31 December 2017. Therefore, the aging of trade receivables are not presented.

FINANCE LEASE RECEIVABLES

All finance lease contracts which were included in the other receivables, according to the classification based on IAS 17, expired during the period in 2017 (receivables related to other leases totalled 2.1 million Euros in 2016).

Gross receivables from finance leases:

1 000 €	2017	2016
No later than 1 year	0	2 132
Later than 1 year and no later than 5 years	0	0
Later than 5 years	0	0
Total	0	2 132
Unearned finance income	0	-2
Net investment in finance leases	0	2 129

The net investment in finance leases may be analysed as follows:

1 000 €	2017	2016
No later than 1 year	0	2 129
Later than 1 year and no later than 5 years	0	0
Later than 5 years	0	0
Net investment in finance leases	0	2 129

21 SHORT-TERM DEPOSITS, CASH AND CASH EQUIVALENTS

CASH AND CASH EQUIVALENTS

1 000 €	2017	2016
Cash at bank and on hand	43 857	50 821
Commercial papers	0	0
Total	43 857	50 821

Cash and cash equivalents comprise of cash on hand, bank deposits and other short-term (up to three months), liquid investments.

22 INVENTORIES

1 000 €	2017	2016
Fuels		
Coal	1 908	2 635
Other fuels	2 557	4 358
Prepayments	726	1 046
Total	5 190	8 040

No inventory impairment was recorded from continued operations (2016: 0) and from discontinued operations (2016: 0) in 2017.

23 DISCONTINUED OPERATIONS AND ASSETS HELD FOR SALE

Discontinued operations

1 000 €	2017	2016
Income	11 932	20 258
Costs	-13 502	-21 117
Profit before income tax	-1 570	-859
Profit from discontinued operations	-1 570	-859

Cash flow from discontinued operations

1 000 €	2017	2016
Cash flows from operating activities	11 699	45 534
Cash flows from investing activities	318	26
Cash flows from financing activities	0	-50 000
Cash flows total	12 017	-4 439

Board of Directors of PVO-Lämpövoima Oy decided 27 October 2015 to propose, that the electricity production of condensing power plants in Kristiinankaupunki and Pori Tahkoluoto will be terminated. PVO's extraordinary shareholders' meeting approved the decision 13 November 2015. PVO-Lämpövoima's operations are presented in the financial statement 2017 and 2016 as discontinued operations. PVO-Lämpövoima's tangible assets and inventory are presented as assets held for sale.

Assets held for sale

1 000 €	2017	2016
Intangible assets	0	1 042
Tangible assets	2 930	8 664
Loans and other receivables	250	0
Inventory	5 514	12 753
Trade and other receivables	152	794
Total	8 845	23 254

The Board of Directors of Pohjolan Voima Oyj approved 15 December 2016 the arrangement, in which PVO-Alueverkko Oy's shares were sold in January 2017. PVO-Alueverkko Oy's assets and liabilities have therefore been presented in the financial statement 2016 as assets held for sale. Mussalon Voima Oy signed sales agreement 21 December 2016 on the site and 22 December 2016 on the electricity distribution powerline. The title of these asset passed to the buyer when the purchase price was paid in January 2017. Further, sales agreement existed on the coal inventory owned by Mussalon Voima Oy and the inventory was sold in January 2017. These assets have also been presented in the financial statement 2016 as assets held for sale.

Liabilities related to assets held for sale

1 000 €	2017	2016
Borrowings	0	0
Trade and other payables	0	560
Total	0	560

24 EQUITY

According to the articles of association, PVO supplies energy to its shareholders at cost, i.e. delivers energy it has produced or acquired to each shareholder according to their proportionate ownership in each series of shares. Shareholders are according to their proportionate ownership in each series of shares responsible for the fixed costs for the underlying shares, regardless of whether the power or energy share is used or not. Variable costs, on the other hand, are invoiced to the shareholders based on the share of the energy delivered.

Reconciliation of the number of shares:

1 000 €	Number of shares	Share capital	Share issue	Share premium	Revaluation reserve	Reserve for invested non-restricted equity	Equity loans	Retained earnings	Total
1.1.2016	38 617 159	64 108	49 305	288 683	7 507	297 894	0	206 347	913 843
Dividends paid									0
Proceeds from share issue									0
Transfer to retained earnings and reserve for invested non-restricted equity				-18 391		9 208		9 183	0
Refund of reserve for invested non-restricted equity									0
Acquisition and annulment of own shares	-500 000								0
Decrease of the number of shares	-6 312 066								0
Refund of reserves				-50 000		-20 912			-70 912
Other comprehensive income					-4 597			-17 491	-22 088
31.12.2016	31 805 093	64 108	49 305	220 292	2 910	286 190	0	198 039	820 844
Proceeds from share issue	880 448	1 481	-49 305			47 824			0
Transfer to retained earnings and reserve for invested non-restricted equity						-5 145		5 145	0
Adjustment relating to former business combinations of a company dissolved				-3 470					-3 470
Acquisition and annulment of own shares	-176 428	-296							-296
Other comprehensive income					-5 376			-10 392	-15 768
31.12.2017	32 509 113	65 293	0	216 822	-2 466	328 869	0	192 792	801 310

Shares

The number of shares at 31 December 2017 was 32.509.113. The shares have no nominal value. All issued shares are fully paid.

The company has 14 registered series of shares

Share capital by share category	Number	1 000 €
Series A: - entitling the holder to obtain energy produced or purchased by PVO-Vesivoima Oy	13 350 077	22 453
Series B: - entitling the holder to obtain 56.8% of the energy produced or purchased by Teollisuuden Voima Oyj's - Olkiluoto plant 1 and 2	7 124 507	11 983
Series B2: - entitling the holder to obtain 60.2% of the energy produced by Teollisuuden Voima Oyj's Olkiluoto plant 3 once its construction is completed.	5 603 151	9 424
Series C: - entitling the holder to obtain energy produced or purchased by PVO-Lämpövoima Oy	2 224 498	11 954
Series C2: - entitling the holder to obtain 56.8% of the energy produced or purchased by Teollisuuden Voima Oyj's Meri-Pori coal power plant	359 198	604
Series G: - entitling the holder to obtain 49.9% of the energy produced by Oy Alholmens Kraft Ab	354 290	596
Series G2: - entitling the holder to obtain 76.0% of the energy produced by Kymin Voima Oy	238 216	401
Series G4: - entitling the holder to obtain 72.0% of the energy produced by Rauman Biovoima Oy	296 486	499
Series G5: - entitling the holder to obtain energy produced by Laanilan Voima Oy	155 272	261
Series G6: - entitling the holder to obtain energy produced by Porin Prosessivoima Oy	646 217	1 087
Series G9: - entitling the holder to obtain 54.0% of the energy produced by Kaukaan Voima Oy	589 071	991
Series G10: - entitling the holder to obtain 84.0 % of the energy produced by Hämeenkyrön Voima Oy	213 600	359
Series M: - entitling the holder to obtain 84.0 % of the energy produced by Hämeenkyrön Voima Oy	307 707	2 921

- entitling the holder to obtain 100.0% of the energy produced by Mussalon Voima Oy
Series V:
- entitling the holder to obtain 50.0% of the energy produced by Vaskiluodon Voima Oy

1 046 823 1 761

32 509 113 65 293

The following shares were issued during the financial year:

There were no share issues subscribed in 2017.

Other changes in shareholders' equity:

Annual General Meeting of Pohjolan Voima Oyj decided on 22 March 2017 to cover negative retained earnings of 5.1 million Euros by lowering the reserve of invested unrestricted equity fund by the same amount.

The fourth tranche of the B2 series share capital increase subscribed in 2013 (4.107.143 shares directed to the shareholders of B2 series at a subscription price 230.000.008 Euros) was paid during the financial period according to the decision of Extraordinary General Meeting. The subscribed share issue is fully paid.

The company acquired its shares in K1-serie in August 2018. The shares were annulled 23 August 2018.

The company decreased the number of shares in C-series from 7.107.592 to 2.224.498 shares and the new number of shares was registered 25 May 2016. After the decrease 50 million Euros was returned as refund from share premium to the shareholders of C-series.

The company decreased the number of shares in M-series from 1.736.679 to 307.707 shares and the new number of shares was registered 25 May 2016. After the decrease 13.6 million Euros were temporarily transferred from share premium to the reserve of invested non-restricted equity to await the refund to the shareholders of M-series later in 2016.

In K1-series a refund of 4.8 million Euros was made from share premium (through the reserve of invested unrestricted equity) and 2.5 million Euros from the reserve of invested unrestricted equity in December 2016 according to the decision of the extraordinary shareholders' meeting.

Share premium

Share premium is recorded under the old Limited Liability Companies Act (29.9.1978/734), and was calculated as the difference between the nominal value of the shares and the subscription price. Share premium is restricted equity under the Limited Liability Companies Act. Share premium may be reduced to cover losses or it can be returned to owners under certain conditions.

Revaluation reserve

Derivative instruments used in cash flow hedging and fair value gains or losses on investments available-for-sale are recorded in the revaluation reserve. Fair value changes are transferred to the profit for the year when hedged cash flows realize. Fair value changes in investments available-for-sale are transferred to the profit for the year when the investment is disposed of or when its value has been impaired.

Invested non-restricted equity

Subscription prices for shares are recorded in invested non-restricted equity to the extent that they are not, based on an explicit decision, to be recorded as share capital.

25 PROVISIONS

1 000 €	Environmental provisions	
At 1 January 2017	3 889	
Additions	620	
Disposals	0	
Effect of discounting	-18	
At 31 December 2017	4 491	

1 000 €	2017	2016
Non-current	4 491	3 889
Total	4 491	3 889

Environmental provisions

The environmental provisions include provision for the landscaping of power plant landfills. The present value of the landscaping is capitalized as part of the other tangible assets and recorded as a provision. The environmental provision totalled 4.5 million Euros at 31 December 2017 and it is estimated that it will be fully utilised by 2030.

The discount rate used to determine present value was 0.44 %.

26 DEFERRED TAX LIABILITIES

1 000 €	2017	2016
Accumulated depreciation difference 1.1.	843	853
Charged to the statement of comprehensive income	-843	-10
Accumulated depreciation difference 31.12.	0	843

27 BORROWINGS

1 000 €	2017	2016
Non-current:		
Borrowings from associates and joint ventures	196 285	583 334
Borrowings from financial institutions	648 921	282 365
Pension loans	0	2 712
Secured financial liabilities	195 405	216 152
Total	1 040 611	1 084 562
Current:		
Borrowings from financial institutions	6 881	12 170
Pension loans	2 712	2 712
Other interest-bearing current liabilities	109 782	109 808
Secured financial liabilities	20 751	13 649
Total	140 126	138 339
Total borrowings	1 180 736	1 222 901

Fair values of non-current and current borrowings are presented in note 30.

Teollisuuden Voima Oyj is obliged to nuclear waste management. The obligation entitles Teollisuuden Voima Oyj to borrow 75% of its holdings in the State Nuclear Waste Management Fund. Teollisuuden Voima Oyj has granted corresponding loans to its shareholders. Pohjolan Voima's share is 196.3 (583.3) million Euros.

The secured financial liabilities consist of finance lease contracts relating to investments in power plants. Pohjolan Voima Group has 7 finance lease contracts for power plant machinery with an average lease term of 10 years (31 December 2016 8 contracts). Contracts expire in 2018 to 2026. Sale and lease agreements included in sale and leaseback arrangements are evaluated as a whole: Sale does not transfer the risks and rewards of ownership to the buyer, which means that criteria for derecognition are not fulfilled for the seller i.e. the lessee. The arrangement does not transfer the right of use of the assets to the finance company.

OTHER NON-CURRENT LIABILITIES

1 000 €	2017	2016
Other non-current liabilities		
Other non-current liabilities	0	0
Derivative financial liabilities		
Interest rate swaps	2 993	3 626
Total	2 993	3 626

Fair values of derivatives are disclosed in note 29.

INTEREST-BEARING NET LIABILITIES

1 000 €	2017	2016
Interest-bearing liabilities total	1 180 736	1 222 901
Interest-bearing financial assets		
Non-current		
Loan receivables	348 921	288 690
Finance lease receivables	0	0
	348 921	288 690
Current		
Pledged cash deposits	138	182
Interest-bearing receivables	73	208
Finance lease receivables	0	2 129
Cash and cash equivalents	43 857	50 821
Total	44 068	53 340
Interest-bearing financial assets total	392 989	342 030
Interest-bearing liabilities net	787 748	880 871

THE CHANGES OF NET LIABILITIES IN THE CASH FLOW

1 000 €	Other assets		Liabilities arising from financial activities					Total
	Financial assets, non-current	Financial assets, current	Finance lease, non-current	Finance lease, current	Borrowings, non-current	Borrowings, current	Other liabilities, current	
Net liabilities								
1.1.2016	312 601	81 800	-183 764	-46 378	-869 674	-50 415	-116 843	-872 673
Cash flows	-23 911	-28 460	-32 388	32 729	1 264	35 533	7 035	-8 198
Net liabilities								
31.12.2016	288 690	53 340	-216 152	-13 649	-868 410	-14 882	-109 808	-880 871
Cash flows	60 231	-9 272	20 747	-7 102	23 204	5 289	26	93 123
Net liabilities								
31.12.2017	348 921	44 068	-195 405	-20 751	-845 206	-9 593	-109 782	-668 373

28 TRADE PAYABLES AND OTHER CURRENT LIABILITIES

1 000 €	2017	2016
Trade payables	11 576	17 191
Liabilities to associates and joint ventures	25 583	30 738
Accrued expenses	16 653	16 487
Other current liabilities	3 117	6 266
Held emission allowances, Energy Authority	773	1 206
Derivative financial instruments	8	853
Total	57 708	72 742

Emission allowances are recorded at cost and are presented separately on the balance sheet. The obligation relating to emission allowances are recorded at book value of the held allowances to short-term debt. Allowances and the related obligations are derecognised when they are reported or sold.

Accrued expenses:

1 000 €	2017	2016
Accrued personnel expenses	2 695	2 728
Accrued expenses for fuel purchases	6 957	4 846
Accrued expenses for energy purchases	649	824
Accrued rents	1 264	1 519
Interest liabilities	1 692	1 092
Other	3 397	5 476
Total	16 653	16 487

29 DERIVATIVE FINANCIAL INSTRUMENTS

Fair value of derivative financial instruments

1 000 €	2017	2017	Total
	Positive fair values	Negative fair values	
Interest rate swaps	514	-3 515	-3 001
Forward foreign exchange contracts and swaps	0	0	0
Total	514	-3 515	-3 001

1 000 €	2016	2016	Total
	Positive fair values	Negative fair values	
Interest rate swaps	257	-5 538	-5 281
Forward foreign exchange contracts and swaps	0	0	0
Total	257	-5 538	-5 281

Nominal value of derivative financial instruments

1 000 €	2017	2016
Interest rate swaps	272 000	387 000
Forward foreign exchange contracts and swaps	0	0

30 FINANCIAL ASSETS AND LIABILITIES BY CATEGORY

1 000 €	2017	Financial assets and liabilities at fair value through profit and loss	Loans and receivables	Available-for-sale financial assets	Financial liabilities carried at amortised cost	Book value total	Fair value total	Note
Non-current financial assets								
Available-for-sale investments				505		505	505	19
Loan receivables			348 921			348 921	348 921	20
Finance lease receivables						0	0	20
Other receivables			37 041			37 041	37 041	20
		0	385 962	505	0	386 467	386 467	
Current financial assets								
Cash and cash equivalents			43 857			43 857	43 857	21
Loan receivables			211			211	73	20
Share issue receivables			0			0	0	20
Trade and other receivables			49 372			49 372	49 372	20
Prepayments and accrued income			36 869			36 869	36 869	20
Finance lease receivables							0	20
Derivative financial instruments		0				0	0	20
		0	130 309	0	0	130 309	130 172	
Total		0	516 271	505	0	516 777	516 639	
Non-current financial liabilities								
Borrowings from associates and joint ventures					196 285	196 285	196 285	27
Borrowings					648 921	648 921	648 921	27
Secured financial liabilities					195 405	195 405	195 405	27
Other non-current liabilities					0	0	0	27
Derivative financial instruments		2 993				2 993	2 993	27
		2 993	0	0	1 040 611	1 043 604	1 043 604	
Current financial liabilities								
Loans and commercial papers					119 375	119 375	119 375	27
Trade payables					11 576	11 576	11 576	28
Other current liabilities					29 472	29 472	29 472	28
Accrued expenses					16 653	16 653	16 653	28
Secured financial liabilities					20 751	20 751	20 751	27
Derivative financial instruments		8				8	8	28
		8	0	0	197 826	197 834	197 834	
Total		3 001	0	0	1 238 437	1 241 438	1 241 438	

As at 31 December 2017 the amount of offsetting derivative instruments included in the financial assets and financial liabilities in the Group was -3.0 (2016: -4.5) million Euros.

	Gross amounts recognised in the balance sheet	Related amounts not set off in the balance sheet		Net amount				
Derivative contracts 2017	3 001			3 001				
Derivative contracts 2016	4 479		0	4 479				
		Financial assets and liabilities at fair value through profit and loss	Loans and receivables	Available- for-sale financial assets	Financial liabilities carried at amortised cost	Book value total	Fair value total	Note
1 000 €	2016							
Non-current financial assets								
Available-for-sale investments				586		586	586	19
Loan receivables			288 690			288 690	288 690	20
Finance lease receivables						0	0	20
Other receivables			35 601			35 601	35 601	20
		0	324 291	586	0	324 877	324 877	
Current financial assets								
Cash and cash equivalents			50 821			50 821	50 821	21
Loan receivables			390			390	208	20
Share issue receivables			49 305			49 305	49 305	20
Trade and other receivables			62 300			62 300	62 300	20
Prepayments and accrued income			37 974			37 974	37 974	20
Finance lease receivables						2 129	2 129	20
Derivative financial instruments		0				0	0	20
		0	200 789	0	0	202 918	202 737	
Total	0	0	525 080	586	0	527 796	527 614	
Non-current financial liabilities								
Borrowings from associates and joint ventures					583 334	583 334	583 334	27
Borrowings					285 076	285 076	285 076	27
Secured financial liabilities					216 152	216 152	216 152	27
Other non-current liabilities					0	0	0	27
Derivative financial instruments		3 626				3 626	3 626	27
		3 626	0	0	1 084 562	1 088 188	1 088 188	
Current financial liabilities								
Loans and commercial papers					124 690	124 690	124 690	27
Trade payables					17 191	17 191	17 191	28
Other current liabilities					38 210	38 210	38 210	28
Accrued expenses					16 487	16 487	16 487	28
Secured financial liabilities					13 649	13 649	13 649	27
Derivative financial instruments		853				853	853	28
		853	0	0	210 228	211 081	211 081	
Total	4 479	0	0	0	1 294 790	1 299 269	1 299 269	

Fair value estimation

Carrying value of receivables and other receivables with variable interest rates are calculated using the effective interest method. This is also a reasonable estimate of their fair value. Short-term trade and other receivables approximate their fair value, as the effect of discounting is not significant for these receivables due to their short maturities.

Available-for-sale investments include investments in unlisted securities, which are carried at acquisition cost because their fair values are not readily available. The Group has no intention to dispose of these securities.

Carrying value of long-term loans and short-term interest-bearing liabilities is calculated using the effective interest method. Carrying value of loans with variable interest rates is a reasonable estimate of their fair value. Carrying value of short-term interest-bearing liabilities approximate their fair value, as the effect of discounting is not significant due to their short maturity. Fair value of loans with fixed interest rate is determined using a discounted cash flow method. Discount rates used are the market interest rates at the closing date, which were in between -0,46 % - 0,89 % (-0,37 - 0,66 %).

Derivative financial instruments are initially recognized at fair value and subsequently measured at fair value at the closing date. The fair values reflect the prices, which PVO would have to pay or would receive, if it called a derivatives contract. Fair value of interest rate swaps is determined using a discounted cash flow method using market rates prevailing at the closing date as the discount rate, which were -0,46 % - 0,89 % (-0,37 - 0,66 %). Fair values of forward foreign exchange contracts and swaps are determined using quoted forward rates from contracts with similar duration. PVO does not apply hedge accounting according to IAS 39, so the changes in fair values for derivative instruments are recorded in the statement of comprehensive income.

According to IFRS 7, items measured at fair value are classified into three different levels for the notes, depending on how much the fair values are based on market information. Fair values of instruments categorized as Level 1 are based on quoted prices (unadjusted) in active markets for identical instruments; fair values of Level 2 instruments are derived, either directly or indirectly from quoted prices and Level 3 of the fair values are determined using input data that is not based on observable market data. Only derivative financial instruments are recorded at fair value in the balance sheet and they are all in Level 2 in the fair value hierarchy.

31 CONTINGENT LIABILITIES AND ASSETS AND PURCHASE COMMITMENTS

1 000 €	2017	2016
On behalf of own loans		
Pledged deposits	90	87
Other contingent liabilities	203 881	594 353
On behalf of associated companies and joint ventures		
Guarantees	35	37
Guarantee according to Nuclear Energy Act	106 494	82 089
Total	310 500	676 566

The pledged deposits relate mainly to margin accounts for the electricity trading, emission allowance trading and environmental permits.

Other liabilities consist mainly of the parent company's loan guarantees. In 2017 a bank guarantee of 196.3 million Euros (2016: 583.3 million Euros) was given to the State Nuclear Waste Management Fund. A bank guarantee relating to the pension (TyEl) loan amounts to 2.7 million Euros (2016: 5.4 million Euros).

Guarantee under the Nuclear Energy Act

According to the Finnish Nuclear Energy Act, Teollisuuden Voima, a joint venture of which Pohjolan Voima owns 58.47%, is obliged to fund the decommissioning of nuclear power plants and final disposal of spent nuclear fuel through the Finnish State Nuclear Waste Management Fund.

The amount of the contingent liability is determined by the administrative authority (Ministry of Employment and Economy) based on the Nuclear Energy Act. The directly enforceable guarantees relating to Nuclear waste management given by the shareholders of Teollisuuden Voima Oyj cover the uncovered portion of nuclear waste management liability as well as a liability for any unforeseen expenses of nuclear waste management in accordance with the Nuclear Energy Act. The directly enforceable guarantee given by Pohjolan Voima is 106.5 million Euros (2016: 82.1 million Euros).

INVESTMENT COMMITMENTS

Joint ventures

Pohjolan Voima Oyj has committed to an investment into the nuclear power plant Olkiluoto 3 EPR built by Teollisuuden Voiman Oyj during 2004 to 2017. The commitment consists of a 432 million Euros investment, a shareholder loan of 108 million and an additional shareholder loan of a maximum of 451.4 million Euros. As at 31 December 2017 Pohjolan Voima Oy has fulfilled 780.6 (2016: 720.6) million Euros of its commitments. Investments are based on the financial plan of Olkiluoto 3 EPR, according to which capital is raised in accordance with the progress of the project.

LEGAL PROCEEDINGS

Parent company and subsidiaries

Pohjolan Voima's fully owned subsidiary PVO-Lämpövoima Oy (PVL) and Fortum Power and Heat Oy's (FPH) predecessors agreed in 1989 on co-operation agreement according to which the parties have among other things permanent right of use to certain power plant constructions and machines owned by the other party when operating the Tahkoluoto coal power plant owned by PVL and on the other hand Meri-Pori coal power plant owned by FPH. PVL's electricity production at Tahkoluoto site ceased in 2015. Therefore PVL terminated the co-operation agreement in March 2017. FPH disputed the termination and in August 2017 Helsinki district court decided on precautionary measure on FPH's appeal. The precautionary measure rules PVL to allow FPH to continue the use of Tahkoluoto site's power plant constructions and machines as stated in the co-operation agreement. Further, in September 2017, FPH commenced arbitration relating to PVL's termination of the co-operation agreement according to the rules of Helsinki Chamber of Commerce's arbitration proceeding. Simultaneously FPH filed application for summons in Helsinki district court towards Pohjolan Voima Oyj, in which FPH demanded among other things that permanent rights of use according to the co-operation agreement would apply also to Pohjolan Voima. PVL as well as Pohjolan Voima has disputed all demands presented by FPH.

Joint ventures

Teollisuuden Voima submitted in 2012 a claim and defense in the International Chamber of Commerce (ICC) arbitration proceedings concerning the delay and the ensuing costs incurred at the OL3 EPR project. The quantification estimate of TVO's costs and losses updated in July 2015 is approximately 2.6 billion Euros and covers the period until the end of 2018 which is according to OL3 plant supplier the starting point of OL3 EPR's regular electricity production.

The proceedings were initiated in December 2008 by the OL3 EPR plant supplier. The monetary claim the plant supplier updated in April 2017 is in total approximately 3.59 billion Euros. The sum is based on the Supplier's updated analysis of events that occurred through September 2014, with certain claims quantified to 31 December 2014. The sum includes penalty interests (calculated to 30 June 2017) and payments allegedly delayed by TVO under the plant contract 1.58 billion Euros as well as 132 million Euros of alleged loss of profit.

In November 2016, the ICC Tribunal made a final and binding partial award. In the partial award, the ICC Tribunal addressed the early period of the project (time schedule, licensing and licensability, and system design). This comprised many of the facts and matters that TVO relies upon in its main claims against the supplier, as well as certain key matters that the supplier relies upon in its claims against TVO. In doing so, the partial award finally resolved the great majority of these facts and matters in favour of TVO, and conversely rejected the great majority of the supplier's contentions in this regards. The partial award did not take a position on the claimed monetary amounts.

The ICC Tribunal made another final and binding partial award in July 2017. This partial award addressed the preparation, submittal, review, and approval of design and licensing documents on the project. This comprises the key facts and matters that the Supplier relies upon in its main claims against TVO, as well as certain matters that TVO relies upon in its claims against the Supplier. In doing so, the partial award has finally resolved the great majority of these facts and matters in favor of TVO. Conversely, it has also rejected the great majority of the Supplier's contentions in this regard. Although the partial award did not take a position on the claimed monetary amounts, it has conclusively rejected the analytical method used by the Supplier to support its principal monetary claims against TVO.

The parties received a final and binding partial award also in November 2017. This partial award addresses the execution and construction works and the overall project management of the OL3 EPR project. This comprises many facts and matters that TVO relies upon in its main claim against the Supplier, as well as certain matters that the Supplier relies upon in its claims against TVO. The partial award finally resolves many of the facts and matters concerning the execution of the construction works in favor of TVO and notably defers many of the issues raised by TVO including the Supplier's project management for determination in a subsequent award.

TVO considers its claims to be well-founded and has considered and found the claims of the Supplier to be without merit. The three significant partial awards granted by the Tribunal provide further material confirmation of this position, and reinforce TVO's view that the balance of the claims is in TVO's favor.

In September 2016, TVO summoned Areva in an urgent interim proceeding before the President of the Commercial Court of Nanterre in order to obtain information about the restructuring of French nuclear industry and the potential consequences on the performance of the OL3 contract. Discussions between the parties enabled TVO to withdraw from this action in May 2017. The continuation of discussions is expected to favor completion of the OL3 EPR project and the start-up of the plant.

In January 2017, the EU Commission made a decision on the French state aid to the Areva Group. In September 2017, TVO filed an appeal to the General Court of the European Union of the Commission decision. TVO requires that the restructuring of the French nuclear industry will not compromise the completion of the OL3 EPR project within the Supplier's current schedule and that all liabilities of the plant contract are respected.

The companies belonging to the plant supplier consortium (AREVA GmbH, AREVA NP SAS and Siemens AG) are jointly and severally liable for the plant contractual obligations.

TVO has recorded no provisions or receivables based on the arbitration proceedings.

32 OPERATING LEASES

The Group has leased the Helsinki, Harjavalta, Nokia and Oulu office spaces. The lease expires in 2022 for the Helsinki office. Other leases are valid for the time being. The contracts include the possibility to continue the lease period after the expiration date of the initial contract period.

1 000 €	2017	2016
No later than 1 year	649	637
Later than 1 year and no later than 5 years	2 050	3 146
Total	2 699	3 784

33 EMISSION ALLOWANCES

Carbon Dioxide Emission

Generally the Group holds emission allowances covering the annual CO₂ emissions. If the actual emissions exceed allowances held, the company has recognised an expenses for emission rights at market price for each ton of emission exceeding its allowances. PVO-Lämpövoima's, which is classified as discontinued operations, emission information is not included the below listed information.

	2017	1 000 €
	t CO₂	
Allowances received free of charge	316 439	
Combined annual emissions of the plants'	524 796	
Emission allowances held	2 107 573	
External sales of emission allowances *	0	0
External purchases of emission allowances **	118 570	762
	2016	1 000 €
	t CO₂	
Allowances received free of charge*	539 196	
Combined annual emissions of the plants'	689 335	
Emission allowances held	2 378 405	
External sales of emission allowances **	44 000	232
External purchases of emission allowances ***	251 005	1 256

* Emission sales are included in revenue.

** The cost of purchased emission rights are included in materials and services and remaining emission allowances held at the closing date are included the balance sheet as intangible assets.

34 RELATED-PARTY TRANSACTIONS

The Group's related parties include the parent company, subsidiaries, associates and joint ventures as well as the largest shareholder, UPM-Kymmene Group. Related parties also include the Board of Directors and the Corporate Executive Team members including the CEO and Deputy CEO.

Parent company and subsidiaries:

Company	Production	Country	Ownership (%)	Voting right (%)
Hämeenkyrön Voima Oy	Thermal Power	Finland	84,000	84,000
Kaukaan Voima Oy	Thermal Power	Finland	54,000	54,000
Kymin Voima Oy	Thermal Power	Finland	76,000	76,000
Laanilan Voima Oy	Thermal Power	Finland	100,000	100,000
Porin Prosessivoima Oy	Thermal Power	Finland	100,000	100,000
Powest Oy	Services company	Finland	80,519	98,805
PVO-Lämpövoima Oy	Thermal Power	Finland	100,000	100,000
PVO Power Management Oy	Services company	Finland	100,000	100,000
PVO Power Services Oy	Services company	Finland	100,000	100,000
PVO-Vesivoima Oy	Hydropower	Finland	100,000	100,000
Rauman Biovoima Oy	Thermal Power	Finland	71,949	71,949
Rouhialan Voimansiirto Oy	Services company	Finland	100,000	100,000

List of associated companies and joint ventures

Company	Registered Office
Associated companies	
Oy Alholmens Kraft Ab	Pietarsaari
Länsi-Suomen Voima Oy	Harjavalta
Tahkoluodon Polttoöljy Oy	Pori
Tomiolaakson Voima Oy	Ylitornio
Joint ventures	
Teollisuuden Voima Oyj	Helsinki
Vaskiluodon Voima Oy	Vaasa
Voimalohi Oy	Kemi

Transactions with related parties, 1000 €

Related party transactions relate to normal business operations of Pohjolan Voima.

2017	Sales	Purchases	Receivables	Liabilities
Associates and joint ventures	3 378	224 743	411 191	221 868
UPM-Kymmene Group	181 026	65 480	19 040	9 847

2016	Sales	Purchases	Receivables	Liabilities
Associates and joint ventures	4 156	243 403	357 533	614 072
UPM-Kymmene Oyj	195 525	65 530	19 254	11 836

The Board of Directors and Executive team

Senior management of Pohjolan Voima consists of the board members and the executive management team members, including the President and CEO and the deputy President & CEO. The Group has not granted any loans to senior management, and has no business transactions with management.

1 000 €	2017	2016
Salaries and other short-term employee benefits	2 129	2 087
Total	2 129	2 087

35 BREAKDOWN OF SHARE OWNERSHIP AND SHAREHOLDER INFORMATION

Shareholder	2017	2016
	% of shares	% of shares
EPV Energia Oy	5,49%	5,46%
Etelä-Suomen Voima Oy	1,48%	1,43%
Helen Oy	0,62%	0,60%
Kemira Oyj (ml. Eläkesäätiö)	5,06%	4,98%
Keskinäinen Eläkevakuutusyhtiö Ilmarinen	1,83%	1,87%
Kokkolan Energia Oy	1,85%	2,41%
Kymppivoima Oy	5,91%	5,77%
Metsä Group (Metsäliitto, Metsä Fibre, Metsä Board Oyj)	3,66%	3,64%
Myllykoski Oyj *)	0,63%	0,61%
Oulun Energia Oy	0,91%	0,93%
Outokumpu Oyj	0,10%	0,10%
Oy Perhonjoki Ab	2,17%	2,18%
Porin kaupunki	1,40%	1,41%
Rautaruukki Oyj	0,09%	0,08%
Stora Enso Oyj	15,61%	15,54%
UPM Energy Oy	47,69%	47,35%
UPM Paper ENA Oy	3,46%	3,53%
Vantaan Energia Oy	0,23%	0,22%
Yara Suomi Oy (ml. Eläkesäätiö)	1,84%	1,88%
Yhteensä	100,00%	100,00%

*) Myllykoski Oyj is a part UPM-Kymmene Group.

Shareholders by sector	%	%
	of shares	of shares
Forest industry	71,04%	70,68%
Energy companies	18,64%	19,00%
Chemical industry	6,90%	6,87%
Metal industry	0,19%	0,18%
Other	3,23%	3,28%
Yhteensä	100,00%	100,00%

36 EVENTS AFTER THE REPORTING PERIOD

The Board of Directors of Pohjolan Voima has decided 25 January 2018 to propose to the extraordinary shareholders' meeting on 1 March 2018 that Pohjolan Voima will approve the sale of the Seinäjoki power plant, owned by the joint venture Vaskiluodon Voima Oy. If the shareholders' meeting would approve the decision, the agreement will come to force 1 March 2018.

Parent company financial statements (FAS)

Content

Income Statement

Balance Sheet

Cash Flow Statement

Notes to financial statements

PARENT COMPANY FINANCIAL STATEMENTS (FAS)

INCOME STATEMENT

1 000 €	Note	1.1. - 31.12.2017	1.1. - 31.12.2016
Revenue	2	387 081	445 766
Other operating income	3	6 458	507
Materials and services	4	-137 874	-184 859
Personnel expenses	5	-6 856	-7 497
Depreciation, amortisation and impairment	6	-1 157	-1 458
Other operating expenses	7	-242 620	-250 650
Operating profit or loss		5 033	1 809
Finance income and costs	8	-7 214	-6 946
Profit or loss before appropriations and taxes		-2 181	-5 137
Income tax expense	9	-4	-8
Profit or loss for the year		-2 185	-5 145

BALANCE SHEET

1 000 €	Note	31.12.2017	31.12.2016
ASSETS			
NON-CURRENT ASSETS			
Intangible assets	10	1 055	1 352
Property, plant and equipment	11	729	842
Investments	12		
Holdings in Group undertakings		419 584	423 090
Other investments		1 094 628	1 034 925
TOTAL NON-CURRENT ASSETS		1 515 996	1 460 209
CURRENT ASSETS			
Non-current receivables	13	36 718	35 580
Current receivables	14	69 254	126 968
Investments	15	0	0
Cash and cash equivalents		44 347	54 403
TOTAL CURRENT ASSETS		150 320	216 951
Total assets		1 666 315	1 677 160
EQUITY AND LIABILITIES			
EQUITY			
Share capital	16	65 293	64 108
Share issue		0	49 305
Share premium		216 822	216 822
Revaluation reserve		218 644	218 644
Reserve for invested non-restricted equity		328 869	286 190
Retained earnings		0	0
Profit or loss for the year		-2 186	-5 145
TOTAL EQUITY		827 442	829 925
LIABILITIES			
Non-current liabilities	18	631 285	636 046
Current liabilities	19	207 588	211 189
TOTAL LIABILITIES		838 873	847 235
Total equity and liabilities		1 666 315	1 677 160

CASH FLOW STATEMENT

1 000 €		1.1. - 31.12.2017	1.1. - 31.12.2016
Operating activities			
Operating profit or loss		5 032	1 810
Adjustments to operating profit or loss	1)	-4 594	1 331
Change in net working capital	2)	-250	-20 343
Interest paid		-8 383	-8 822
Interest received		3 465	4 364
Dividends received		7	1
Change in provisions		0	-100
Other financial items		-3 390	-3 677
Income tax paid		-5	-7
Cash flow from operating activities		-8 119	-25 443
Investments			
Proceeds from other investments		80	0
Purchases of property, plant and equipment and intangible assets		-262	-306
Proceeds from the sale of shares in subsidiaries		7 460	7 645
Refund of reserves		0	50 000
Proceeds from sales of property, plant and equipment and intangible assets		2 197	241
Increase (-) or decrease (+) of loan receivables		-60 231	0
Cash flow from investing activities		-50 756	57 580
Financing			
Proceeds from borrowings		385 000	10 223
Repayments of borrowings		-389 760	-2 711
Proceeds (+) or repayments (-) of current interest-bearing liabilities		135	14 409
Refund of reserves		4 435	-70 913
Purchase of own shares		-297	0
Proceeds from issuance of ordinary shares		49 305	0
Cash flow from financing activities		48 818	-48 992
Net (decrease)/increase in cash and cash equivalents		-10 056	-16 855
Cash and cash equivalents at 1.1.		54 403	71 258
Cash and cash equivalents at 31.12.		44 347	54 403
1) Adjustments to operating profit or loss			
Depreciation, amortisation and impairment		1 157	1 458
Losses(+) or gains (-) of sales of non-current assets		-5 751	-127
		-4 594	1 331
2) Change in net working capital			
Increase (-) or decrease (+) of non-interest-bearing receivables		6 894	11 080
Increase (+) or decrease (-) of current non-interest-bearing liabilities		-7 144	-31 423
		-250	-20 343

Notes to financial statements

1 Basis of preparation

Pohjolan Voima Oyj's financial statements have been prepared in accordance with Finnish Accounting Standards (FAS) and other laws and regulations governing the preparation of the financial statements in Finland.

Pohjolan Voima Oyj (0210161-4, Helsinki) is the parent company of Pohjolan Voima – Group.

Revenue

Revenue is recognised net of value-added taxes and discounts. Revenue is recognised at the time of delivery.

Other operating income

Revenue from activities outside the normal operations is reported in other operating income. This includes items such as rental income and gains on sale of assets.

Research and development costs

Research and development costs are expensed as incurred.

Pension costs

Statutory pension liabilities are covered through pension insurance arrangements.

Foreign currencies and derivative contracts

Transactions denominated in foreign currencies have been valued using the exchange rate at the date of the transaction. Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date have been valued using the exchange rate quoted on the balance sheet date. Exchange rate differences are presented within finance income and cost in the income statement.

In accordance with the financing policy, Pohjolan Voima Oyj enters into derivative contracts only for managing the interest rate risk and for hedging purposes. The interest rate risk is monitored by means of duration, which is set at the level where the electricity price sensitivity to changes in interest rates is on an acceptable level considering the individual risk-bearing capacity of each series of shares. Derivative contracts are not fair-valued but considered as off-balance sheet items. Derivatives used to manage interest rate risk are accrued for the contract period and they are recognised against the interest expenses of the hedged loans. Pohjolan Voima Oyj enters into foreign exchange rate derivative contracts relating to the fuel purchases of its subsidiaries. The key figures of derivatives are disclosed in the notes.

Income taxes and deferred taxes

The tax expense for the period comprises current tax, relating to the current period and any adjustments made to taxes for the previous financial period. Pohjolan Voima operations are based on cost price and the company does not pay any taxes on its energy related operations. No deferred tax assets on the operating losses from previous periods have been recognized.

Non-current assets

The intangible assets and property, plant and equipment is stated at historical cost less accumulated amortisation and depreciation according to plan. Historical cost includes the variable costs of the investment. Received government grants have been deducted from acquisition cost. Depreciation is calculated using the straight-line method based on the estimated useful lives. Depreciation and amortization is started when the asset is taken into use.

The estimated useful lives have been defined as follows:

Other capitalised long-term expenditure	3-10 years
Machinery and equipment	3-20 years
Buildings and constructions	8-30 years

Investments

Investments include holdings in investment funds with short-term interest and certificates of deposit of financial institutions. Investments are recognised in the balance sheet at cost. They are included in cash and cash equivalents in the cash flow statement.

NOTES TO INCOME STATEMENT

2 SALES

1 000 €	2017	2016
Sales of electricity produced	280 216	312 783
Sales of heat produced	101 462	127 718
Other sales	5 403	5 265
Total	387 081	445 766

3 OTHER OPERATING INCOME

1 000 €	2017	2016
Gains on sale and dissolution of fixed assets and subsidiaries' shares	5 764	139
Rental income	66	339
Other income	628	29
Total	6 458	507

4 MATERIALS AND SERVICES

1 000 €	2017	2016
Energy purchases	137 874	184 859
Total purchases	137 874	184 859

5 PERSONNEL EXPENSES AND AVERAGE NUMBER OF PERSONNEL

1 000 €	2017	2016
Wages and salaries		
Board members and CEO	997	964
Other wages and salaries	4 689	5 148
Total	5 686	6 112
Pension expenses	975	1 130
Other personnel expenses	195	255
Total	1 170	1 385
Total personnel expenses	6 856	7 497
Average number of personnel		
Salaried employees	57	64
Wage-earners	0	0
Total	57	64

6 DEPRECIATION, AMORTISATION AND IMPAIRMENT

1 000 €	2017	2016
Depreciation according to plan		
Intangible rights	10	21
Other capitalised long-term expenditure	593	689
Buildings and constructions	15	19
Machinery and equipment	92	196
Investments	447	447
Impairment of non-current assets	0	86
Total	1 157	1 458

7 OTHER OPERATING EXPENSES

1 000 €	2017	2016
Energy purchases	236 326	244 496
Repair, servicing and maintenance services	65	247
Rents	803	697
Real estate taxes	6	11
Fees to experts	2 956	2 831
Other expenses	2 464	2 368
Total	242 620	250 650

AUDITOR'S FEES

1 000 €	2017	2016
PricewaterhouseCoopers Oy:		
Audit fees	98	103
Tax advisory	2 000	0
Auditor's mandatory opinions	2	2
Other services	43	18
Total	145	123

8 FINANCE INCOME AND COSTS

1 000 €	2017	2016
Dividend income from others	7	1
Interest income from investments in participating interests	2 369	2 622
Other interest and finance income from Group undertakings	1 024	1 667
from others	38	78
Total finance income	3 438	4 368
Interest costs and other financial costs		
Group undertakings	0	-5
participating interests	-1 470	-3 213
Others	-9 182	-8 096
Total finance costs	-10 652	-11 314
Total finance income and costs	-7 214	-6 946
Other interest and financial income includes exchange rate differences (net).	0	43

9 INCOME TAXES

1 000 €	2017	2016
Income taxes for the period	3	8
Income taxes from previous periods	1	0
Total	4	8

NOTES TO BALANCE SHEET

10 INTANGIBLE ASSETS

1000 €	Intangible rights	Other capitalised long-term expenditure	Total
Cost or valuation at 1.1.	73	5 308	5 381
Disposals	-11	-354	-365
Reclassifications	-	316	316
Cost or valuation at 31.12.	62	5 270	5 332
Accumulated amortisation 1.1.	-52	-3 977	-4 029
Accumulated amortisation of disposals and reclassifications	-	355	355
Amortisation for the period	-10	-593	-603
Accumulated amortisation 31.12.	-62	-4 215	-4 277
Net book amount 31.12.2017	0	1 055	1 054
Net book amount 31.12.2016	21	1 331	1 352

11 PROPERTY, PLANT AND EQUIPMENT

1000 €	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Prepayments	Total
Cost or valuation at 1.1.	125	984	2 920	46	111	4 186
Additions	-	280	6	-	205	491
Disposals	-27	-272	-1 838	-	-	-2 137
Reclassifications	-	-	-	-	-316	-316
Cost or valuation at 31.12.	98	992	1 088	46	0	2 224
Accumulated depreciation 1.1.	-	-833	-2 511	-	-	-3 344
Accumulated depreciation of disposals and reclassifications	-	143	1 813	-	-	1 956
Depreciation for the period	-	-15	-92	-	-	-107
Accumulated depreciation 31.12.	-	-705	-790	-	-	-1 495
Net book amount 31.12.2016	98	287	298	46	0	729
Net book amount 31.12.2015	125	151	409	46	111	842

Production machinery and equipment at 31.12. 0

12 INVESTMENTS

1000 €	Holdings in Group undertakings	Participating interests	Receivables from participating interests	Other shares and similar rights of ownership	Total
Cost or valuation at 1.1.	429 312	745 656	288 689	580	1 464 237
Additions	-	-	60 231	-	60 231
Disposals	-3 506	-447	-	-81	-4 034
Cost or valuation at 31.12.	425 806	745 209	348 920	499	1 520 434
Accumulated impairment 1.1.	-6 222	-	-	-	-6 222
Accumulated impairment 31.12.	-6 222	-	-	-	-6 222
Net book amount 31.12.2016	419 584	745 209	348 920	499	1 514 212
Net book amount 31.12.2015	423 090	745 656	288 689	580	1 458 015

Revaluations included in the cost at 31.12. 0

13 NON-CURRENT RECEIVABLES

1 000 €	2017	2016
Capital loan receivables	1	1
Other non-current receivables	36 717	35 579
Total	36 718	35 580
Receivables from Group undertakings		
Capital loan receivables	1	1
Total receivables from Group undertakings	1	1
Receivables from participating interests		
Other non-current receivables	36 717	35 579
Total receivables from participating interests	36 717	35 579

14 CURRENT RECEIVABLES

1 000 €	2017	2016
Trade receivables	36 563	43 031
Loan receivables	0	135
Other receivables	383	108
Share issue receivables	0	49 305
Prepayments and accrued income	32 308	34 389
Total	69 254	126 968
Receivables from Group undertakings		
Trade receivables	60	-20
Prepayments and accrued income	410	644
Total receivables from Group undertakings	470	624
Receivables from participating interests		
Trade receivables	8	50
Loan receivables	0	135
Prepayments and accrued income	23 807	25 025
Total receivables from participating interests	23 815	25 210
Prepayments and accrued income:		
Accrued financial expenses	1 107	1 670
Accrued personnel expenses	13	26
Accrued interest income	599	634
Accrued sales of emission rights	638	535
Accrued arrangement fee for credit facility	1 078	976
Accrued VAT on prepayments	5 560	5 704
Accrued energy purchases, credit	124	840
Accrued energy purchases	22 809	23 624
Others	380	380
Total	32 308	34 389
Interest-bearing receivables		
Non-current assets	348 922	288 690
Current assets	44 347	54 538
Total	393 269	343 228

15 EQUITY

1 000 €	2017	2016
Share capital 1.1.	64 108	64 108
Transfer from share issue	1 481	0
Purchase and annulment of own shares	-296	0
Share capital 31.12.	65 293	64 108
Share issue 1.1.	49 305	49 305
Transfer to share capital	-1 481	0
Transfer to reserve for invested non-restricted equity	-47 824	0
Share issue 31.12.	0	49 305
Share premium 1.1.	216 822	285 214
Transfer to reserve for invested non-restricted equity	0	-18 392
Refund of reserves	0	-50 000
Share premium 31.12.	216 822	216 822
Revaluation reserve 1.1.	218 644	218 644
Revaluation reserve 31.12.	218 644	218 644
Reserve for invested non-restricted equity 1.1	286 190	297 894
Transfer from share capital	47 824	0
Transfer from share premium	0	18 392
Refund of reserves	0	-20 913
Purchase and annulment of own shares	0	0
Transfer to retained earnings	-5 145	-9 183
Reserve for invested non-restricted equity 31.12	328 869	286 190
Retained earnings 1.1.	-5 145	-9 183
Transfer from reserve for invested non-restricted equity	5 145	9 183
Retained earnings 31.12.	0	0
Profit or loss for the year	-2 186	-5 145
Total	827 442	829 925
Distributable earnings 31.12.		
Retained earnings	0	0
Profit or loss for the year	-2 186	-5 145
Reserve for invested non-restricted equity	328 869	286 190
Total	326 683	281 045

Share capital by share category, see note 23 in the consolidated financial statements.

16 NON-CURRENT LIABILITIES

1 000 €	2017	2016
Loans from financial institutions	435 000	50 000
Pension loans	0	2 712
Other non-current liabilities	196 285	583 334
Total	631 285	636 046
Liabilities to participating interests		
Other non-current liabilities	196 285	583 334
Liabilities with more than five years to maturity		
Other non-current liabilities	0	583 334
Total	0	583 334
Non-interest-bearing and interest-bearing non-current liabilities		
Interest-bearing	631 285	636 046
Total	631 285	636 046

17 CURRENT LIABILITIES

1 000 €	2017	2016
Other interest-bearing liabilities	162 201	157 765
Trade payables	37 824	43 450
Other current liabilities	280	0
Accrued expenses	7 283	9 974
Total	207 588	211 189
To Group undertakings		
Trade payables	14 849	16 382
Other current liabilities	280	0
Accrued expenses	202	616
To Group undertakings, total	15 331	16 998
To participating interests		
Trade payables	22 804	26 005
Accrued expenses	2 558	4 440
To participating interests, total	25 362	30 445
Accrued expenses		
Accrued personnel expenses	1 837	1 726
Accrued interest costs	3 045	4 167
Accrued energy sales, credit	222	1 520
Accrued energy purchases	1 290	1 781
Accrued emission right purchases	687	534
Others	202	246
Total accrued expenses	7 283	9 974
Non-interest-bearing and interest-bearing current liabilities		
Non-interest-bearing	45 388	53 424
Interest-bearing	162 200	157 765
Total	207 588	211 189

18 GUARANTEES AND CONTINGENT LIABILITIES

1 000 €	2017	2016
Guarantees		
Guarantees for loans		
On behalf of participating interests	19	20
Other guarantees		
As security for own liabilities	199 078	588 757
On behalf of Group undertakings	0	3 800
Total guarantees	199 097	592 577
Leasing liabilities		
Payments during the following year	78	83
Payments in subsequent years	30	68
Total leasing liabilities	108	151
Rental liabilities		
Payments during the following year	649	632
Payments in subsequent years	2 050	3 016
Total leasing liabilities	2 699	3 648
Other contingent liabilities		
Guarantee according to Nuclear Energy Act	106 494	82 088
As security for own liabilities	101	181
Total other contingent liabilities	106 596	82 269

According to the Finnish Nuclear Energy Act, Teollisuuden Voima, a joint venture of which Pohjolan Voima owns 58,47%, is obliged to fund the decommissioning of nuclear power plants and final disposal of spent nuclear fuel through the Finnish National Nuclear Waste Management Fund.

The amount of the contingent liability is determined by the administrative authority (Ministry of Employment and Economy) based on the Nuclear Energy Act. The directly enforceable guarantees given by the shareholders of Teollisuuden Voima Oyj cover the uncovered portion of the Nuclear Waste Management obligation as well as a liability for any unforeseen expenses of nuclear waste management in accordance with the Nuclear Energy Act. The directly enforceable guarantee given by Pohjolan Voima is 106.5 million Euros (2016: 82.1 million Euros).

19 DERIVATIVE FINANCIAL INSTRUMENTS

1 000 €	2017	2016
Interest rate swap contracts		
Nominal value	434 000	564 000
Market value (including retained interests)	-1 443	-2 116
Average maturity (years)	5,3	3,1
Floating reference rate	Euribor 6 mo/ Euribor 3 mo/ Euribor 1 mth./	Euribor 6 mo/ Euribor 3 mo/ Euribor 1 mth./
Fixed rate (on average)	0,668%	1,095%
The interest rate swap contracts cover the following financial agreements with floating interest rates:		
Bank credit	435 000	50 000
Amounts owed to participating interests	196 285	583 334

Financing risks

Board of Directors approve a financing policy for the company, which determines the purpose and risk levels for the financing operations. The refinancing risk is managed through diversified sources of financing, sufficiently long maturity of loans and a balanced schedule of maturity. The primary loan currency is the euro. If loans are taken out in other currencies, the currency risk is eliminated by means of derivative contracts. The interest rate risk is monitored by means of duration, which indicates the sensitivity of the loan portfolio to changes in the interest rates. The duration of the loan portfolio is managed within the limits set by the financing policy, using derivative contracts if necessary.

The Group maintains a certain amount of liquid assets, credit limit arrangements and commercial paper programmes to reduce the liquidity risk. The Group's liquidity is secured by the 300 million Euros revolving credit facility, which matures in 2021. The loan facility was fully undrawn as per 31.12.2017. For its short-term financing, the company uses mainly its domestic 300 million Euros commercial paper program.

The excess liquidity is invested in secure and profitable instruments with a duration of up to 12 months. Investments are diversified to various instruments and the investment instruments which are chosen based on guaranteed liquidity in the secondary market even under unfavorable.

The foreign exchange risk inherent in Pohjolan Voima Oyj subsidiaries' fuel purchases in foreign currency, is managed by foreign exchange derivatives according to coal procurement policy approved by the Pohjola Voima Oyj Board of Directors. These transactions are managed centrally by the parent company.

Signing of the Board of directors' report and financial statements

Board of Directors' dividend proposal

The parent company Pohjolan Voima's profit and loss account indicates a loss of € 2 186 262,01.

The Board of Directors proposes to the Annual General Meeting that the loss be transferred to the retained earnings account, and that no dividends be distributed.

Helsinki, March 1, 2018

Tapio Korpeinen

Chairman

Seppo Parvi

Deputy Chairman

Esa Kaikkonen

Jukka Hakkila

Anders Renvall

Tapani Sointu

Rami Vuola

Juhani Järvelä

Mikko Rintamäki

Lauri Virkkunen

President and CEO

The Auditor's note

Our auditor's report has been issued today.

Helsinki, March 16, 2018

PricewaterhouseCoopers Oy

Authorised Public Accountants

Jouko Malinen

Authorised Public Accountant

Auditor's Report (Translation from the Finnish Original)

To the Annual General Meeting of Pohjolan Voima Oyj

Report on the Audit of the Financial Statements

Opinion

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial performance and financial position in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of the financial statements in Finland and comply with statutory requirements.

What we have audited

We have audited the financial statements of Pohjolan Voima Oyj (business identity code 0210161-4) for the financial year 1 January - 31 December 2017. The financial statements comprise:

- the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement and notes.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

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

Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

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, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether

due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or to cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were

of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises information included in the report of the Board of Directors and in the Annual Report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact. We have nothing to report in this regard.

Other Opinion

We support that the Members of the Board of Directors the Managing Director and the Deputy Managing Director should be discharged from liability for the financial period audited by us.

Helsinki 16 March 2018

PricewaterhouseCoopers Oy

Authorised Public Accountants

Jouko Malinen

Authorised Public Accountant