



Pohjolan Voima Annual Report

2019



Contents

CEO's review	1
Production year	4
Responsibility	10
Personnel	13
Environment	19
Projects	27
Corporate Governance	31
Financial statements	38
Report by the Board of Directors	38
Consolidated statement of comprehensive income	38
Consolidated balance sheet	39
Consolidated statement of cash flows	40
Consolidated statement of changes in equity	40
Notes to the consolidated financial statements	40
Note 1	40
Note 2	40
Note 3	40
Notes 4-16	40
Note 17	40
Note 18	40
Note 19	40
Notes 20-25	40
Note 26	40
Notes 27-30	40
Note 31	40
Notes 32-34	42
Notes 35-37	42
Parent company financial statements (FAS)	44
Income Statement and Balance Sheet	44
1 Basis of preparation	44
Notes to Income Statement	44
Notes to Balance Sheet	44
Board of Directors' dividend proposal	49
Auditor's Report	49

DECISIVE POWER.

Decisive Power.

The year 2019 was a year of strong renewal for Pohjolan Voima. We started the work on our strategy together with our employees and customers at the very beginning of the year. The Group's Board of Directors ratified the new strategy in June. In accordance with the strategy, our duty at Pohjolan Voima is to create decisive power to strengthen competitiveness and contribute to a better tomorrow.

Pohjolan Voima's essence and profound significance are linked to our role in society and the curbing of climate change. By producing electricity and heat at cost price, we do our part to ensure that our customers – the industry, other energy companies and municipalities – will succeed. Indirectly, we create jobs and wellbeing in Finland. At present, we produce nearly 20% of all the electricity in Finland, and 94% of the electricity we produce is already carbon neutral – we expect to exceed the limit of 95% this year. With our carbon neutral production, we do our part in creating a cleaner world and assist our customers in reducing their CO₂ emissions.

Three themes and dozens of development projects

Pohjolan Voima's future is based on three strategic themes: market-based progress towards carbon neutrality, seeking for a competitive edge from the development of regulating skills and aiming for top asset management expertise.

In addition, all of our choices and decisions aim at curbing climate change. We participate in the development of nuclear power production, restrict peat and fossil fuels as startup and backup fuels whenever the market situation allows and maintain our readiness to introduce new solutions on an industrial scale.

In future, fluctuations in electricity production will be even faster and greater than now. Flexibility and the ability to balance production based on the demand will become even more valuable capabilities. The increasing share of wind and solar power, the volume of which fluctuate depending on the weather conditions, in the electricity system will further speed up this development. We develop the regulation capability of our production with the help of market information. We increase the value of regulation by means of investments.

We hold in our hands a great asset, and we care for it in the best possible way. Here, production asset does not refer only to our systems, but everything we need for our operations. We perform effective maintenance actions and carry out timely investments. We use smart systems, digitisation and knowledge-based management in our operations. We will continue to strengthen our networks and partnerships, because together we are more.

We have initiated a host of projects to implement the strategy. In 2019, we had more than forty ongoing development projects with which we aim for new solutions and strive to decrease our emissions and lifecycle costs, as well as to improve our operational reliability, efficiency and flexibility.

Improved regulation capability and cooperation to revive migratory fish stocks

In terms of hydropower, we maintain the good condition of our plants, minimise the risk of environmental damage and improve the capability of our plants to support the functionality of the electricity system by providing regulating power. In 2019, we completed a reform of the electricity and automation systems at the Raasakka power plant and made a decision to overhaul the Jumisko hydropower plant in the Kemijoki river in 2021. We introduced a whole new type of turbine regulator at our three hydropower plants in the Iijoki river. The regulators enable much faster and more accurate control of the electricity production. The innovative product was created in cooperation with the University of Oulu.

Hydropower production has regional and local effects on water systems and fish stocks. We have several ongoing cooperation projects on management of the aquatic environment and revival of migratory fish stocks. Several cooperation partners signed an agreement on the Iijoki river as a continuation to a waterway vision project called Iijoen otva that was managed by the Oulu Regional Council and ended in 2018. With the agreement, the parties agreed on the implementation of an Iijoki river vision and action plan.

PVO-Vesivoima participates in Finland's largest, three-year migratory fish spearhead project in 2017–2020. The project's action plan includes building a fishway at the Raasakka power plant, creating downward migration solutions for smolt (young salmon and trout), implementing a fry planting programme, as well as transferring fish and performing related actions at the old riverbeds of Raasakka and Maalismaa. The first fence to guide smolt in Finland was installed at our Haapakoski power plant. We are also involved in the development of the old natural riverbed at Raasakka with local partners and participate in the revival of fish stocks in the Kemijoki river.

Managing the entire production plant lifecycle

Pohjolan Voima's combined heat and power plants produce district heat and process steam for local industry and communities, as well as electricity. We invest in solutions which improve the competitiveness, flexibility and efficiency of our plants' energy production and reduce emissions at the same time. Our goal is to care for our power plants throughout their lifecycle.

The Laanilan Voima biopower plant underwent extensive annual maintenance in 2019. The goal was ensuring availability and safe operation of the power plant. Adjustments of the combustion conditions in the boilers of the Kaukaan Voima and Kymin Voima power plants were made using significantly improved process management technology. The cost-efficient solution reduces the generation of nitrogen oxides in the boilers and improves the power plants' energy efficiency.

A project aiming at better management and thus increased utilisation of recycled fuels is ongoing in Hämeenkyrön Voima. We use data, new sensors and analysis tools to improve predictability and fuel management. A pilot project by Rauman Biovoima uses proactive condition monitoring, data analysis and machine learning to detect potential future problems and thus avoid production interruptions.

Power plant lifecycle management also includes end-of-life care. We started the demolition of the coal-fired power plants in Kristiinankaupunki and Tahkoluoto, Pori. The goal is to have the plants completely demolished by the end of 2020. The final decision on the decommissioning of the plants was influenced by our commitment in increasing carbon neutral production. Most of the demolition waste will be recycled. New use for the power plant area in Kristiinankaupunki is being developed in cooperation with local companies.

Finland's most significant contribution to the climate effort will soon start production operations in Olkiluoto

The Government granted the Olkiluoto 3 EPR plant unit an operating licence in March 2019. According to a schedule updated by the plant supplier in December, fuel will be loaded in the reactor of the OL3 EPR plant unit in June 2020, the plant unit will be connected to the national grid for the first time in November 2020 and regular electricity production will start in March 2021. Posiva has also started the construction of a production facility for the handling of spent nuclear fuel at Olkiluoto. The cornerstone for the Posiva encapsulation plant was laid on 23 September.

Strengthening safety culture

Responsible operations are part of Pohjolan Voima's strategic outlook. Our strong values – skilfully, boldly, together – create the foundation for our corporate responsibility. For Pohjolan Voima, responsibility means the responsible management of financial, social and environmental matters. In 2019, the focus areas of our responsibility work included the development of safety management, responsibility in the value chain and the circular economy. The strengthening of the safety culture could be seen as improved power of perception of Pohjolan Voima's personnel: we achieved our safety, environmental and energy efficiency observation goals.

Dedicated work together

During the current major changes of the energy industry, success is enabled by employees who work together for a common goal. According to personnel survey results, one of our strengths is good team spirit. Due to the good results of our personnel satisfaction surveys, we received an honourable mention in the Most Inspiring Employers in Finland 2019 competition – a huge achievement from our energetic, competent and committed employees.

All in all, we did well in this field in 2019. I'm pleased that our customer satisfaction is at a high level and our cooperation is smooth. Pohjolan Voima's strengths are based on its strong network that includes not only our customers, but also our cooperation partners. My thanks for a successful year go to all of Pohjolan Voima's employees, customers and partners. Together we are more – that is why continuous development of partnerships and cooperation will remain a basic prerequisite for our future success as well.

Political decision-making influences the energy industry much more than many other industries. In addition to the market, the changes in our operating environment depend on the government programme and the new Commission's plans. We expect decision-makers both in Finland and in the EU to be consistent and predictable. Societies are being electrified at a fast pace, which causes stronger integration between different industries. For the solutions of the future to remain efficient also in terms of costs, decision-makers must be able to understand the impact of the decisions they make.

The energy industry is becoming a more and more pivotal industry. We at Pohjolan Voima are ready for the future challenges. Pohjolan Voima's employees are strong-minded, and we will openly embrace future challenges. We invest in new, smarter thinking and operations. We make small and larger decisions, even surprising ones, that create solutions and relevance. We are a bold and honest company, and we are a strong and skilled team.

Decisive Power – Skilfully. Boldly. Together.

Ilkka Tykkyläinen

President and CEO, Pohjolan Voima Oyj



Production year 2019

In 2019, Pohjolan Voima's electricity production amounted to 11.7 TWh. Pohjolan Voima's share of all electricity produced in Finland was approximately 17%. Our heat production totalled 4.2 TWh. We produce electricity and heat with hydropower, thermal power and nuclear power.

Electricity production

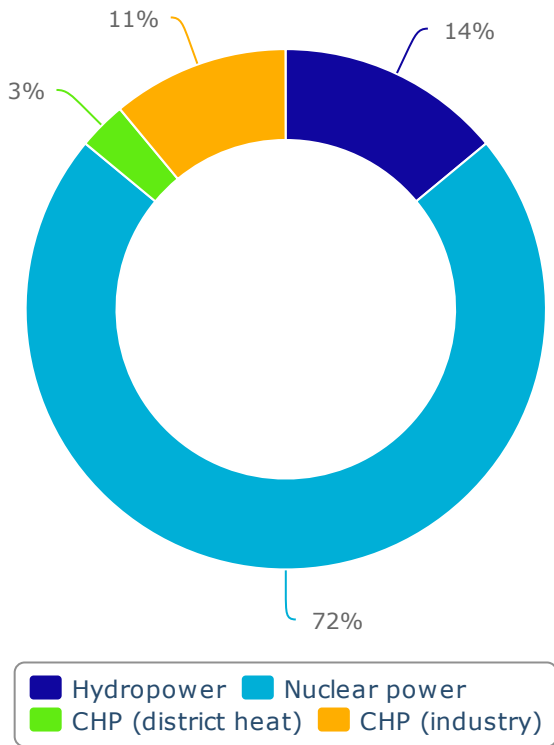
In 2019, we produced a total of 11.7 TWh of electricity. Our total electricity production capacity was 2,323 MW at the end of 2019, amounting to approximately 13% of all the electricity produced in Finland.

The total electricity production capacity includes the capacity of the Kristiinankaupunki condensing power plant (242 MW), which is no longer in production operation. The Tahkoluoto condensing power plant and the production share of the Meri-Pori condensing power plant are no longer included in the electricity production capacity. Demolition of the former started in 2019 and the latter was sold at the turn of 2019.

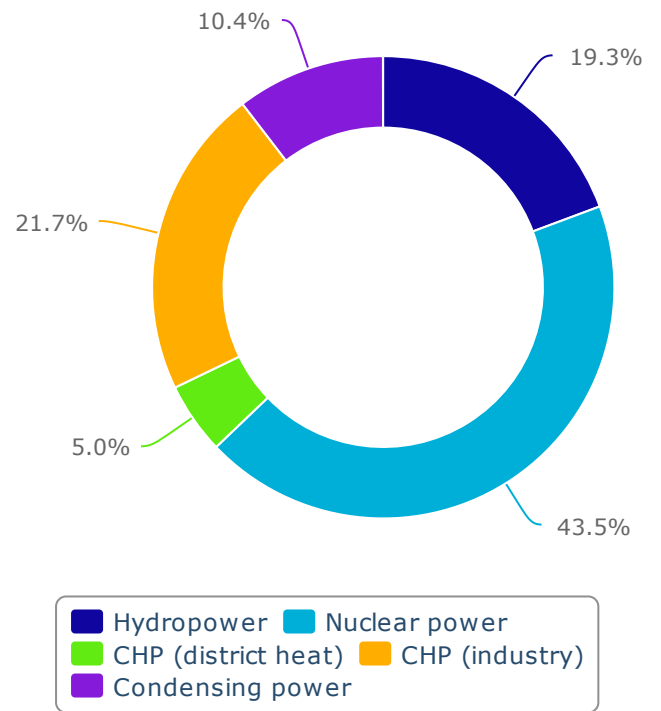
Also see [Pohjolan Voima's production capacity on 31 December 2019](#).

Electricity consumption in Finland in 2019 amounted to 86.1 TWh. Finnish electricity production totalled 66.1 TWh, while net imports into Finland amounted to 20.0 TWh. In 2019, electricity consumption in Finland decreased by 2% year-on-year. Industrial power consumption decreased by 4% and the power consumption of other sectors remained at the same level as in the previous year.

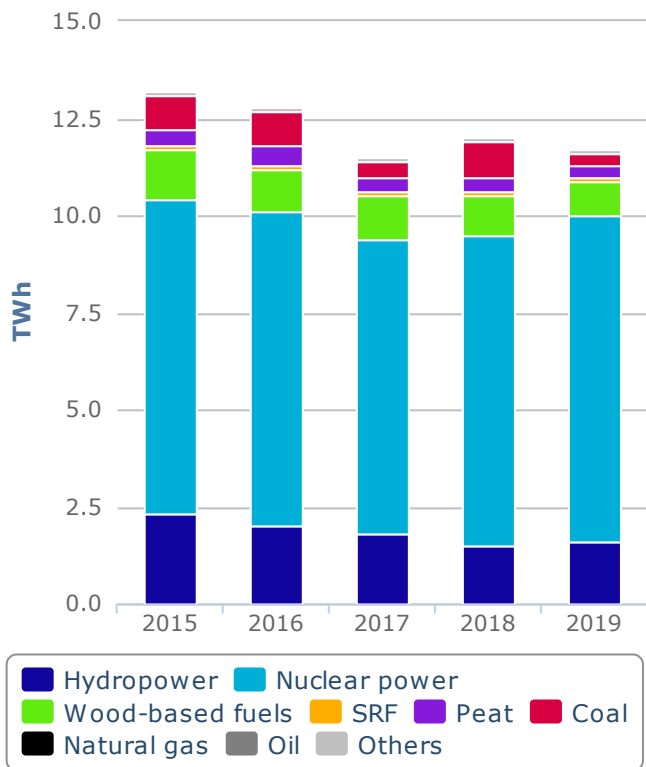
Pohjolan Voima's electricity production in 2019, 11.7 TWh



Pohjolan Voima's electricity production capacity on 31 December 2019, 2323 MW



Pohjolan Voima's electricity production, by energy source in 2015 - 2019, TWh

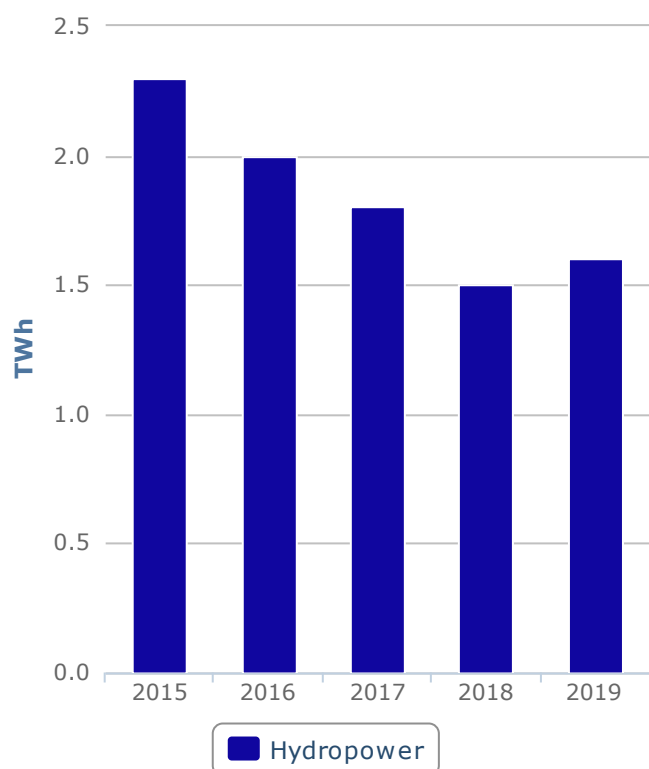


Hydropower production

Pohjolan Voima has a total of 12 hydropower plants, eight fully owned and four partially owned plants, located along the Iijoki, Kemijoki, Kokemäenjoki and Tengeliönjoki rivers. The combined electricity production capacity of these plants is 541 MW, of which Pohjolan Voima's share is 449 MW.

In 2019, we produced a total of 1.6 TWh of electricity with hydropower. The production of hydropower slightly increased from the previous year and was close to the production volume of a normal year in terms of water conditions.

Pohjolan Voima's hydropower production in 2015 - 2019, TWh



Heat production

In 2019, Pohjolan Voima produced 4.2 TWh of heat. We produce heat at our combined heat and power plants, the total heat production capacity of which was 1,472 MW. Our combined heat and power plants produce process heat and district heat for local industry and communities, as well as electricity.

In addition to heat, the combined heat and power plants produced electricity. In thermal power production, we utilised the heat production capacity and a total of 862 MW of electricity production capacity, of which 620 MW was combined heat and power production and 242 MW condensing power production. In 2019, the electricity output of the combined heat and power plants was 1.7 TWh. No electricity was produced by means of condensing power production in 2019.

The condensing power production capacity includes the capacity of the Kristiinankaupunki condensing power plant (242 MW), which is no longer in production operation. The Tahkoluoto condensing power plant and the production share of the Meri-Pori condensing power plant are no longer included in the electricity production capacity. Demolition of the former started in 2019 and the latter was sold at the turn of 2019. Pohjolan Voima does not have any current condensing power production.

In 2019, we used 4.7 TWh of wood-based fuels, 0.6 TWh of recycled fuels, 1.5 TWh of peat and 0.7 TWh of coal in the combined heat and power production. Oil and natural gas are used as startup and backup fuels.

Fuel	Volume used in combined heat and power production in 2019
Wood-based fuels	4.7 TWh
Recycled fuels	0.6 TWh
Peat	1.5 TWh
Coal	0.7 TWh
Oil, natural gas	Used as startup and backup fuels

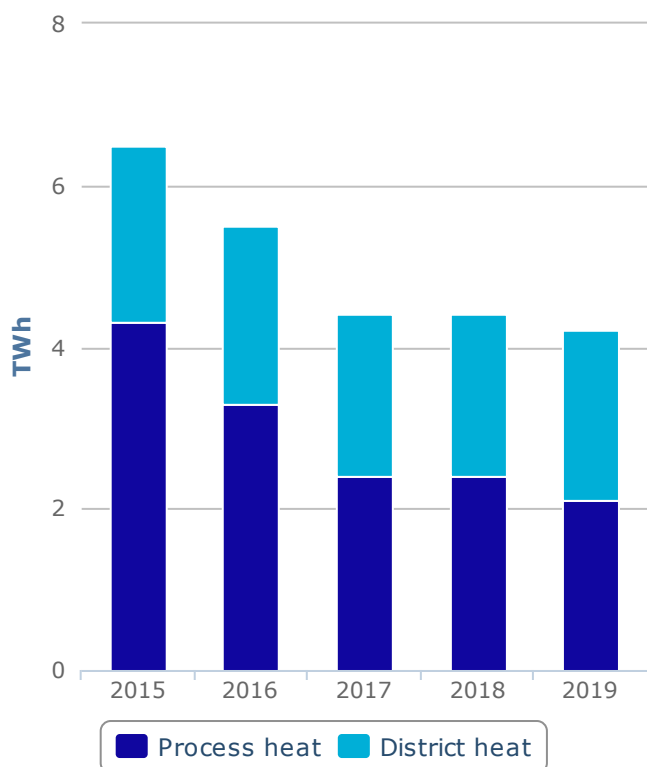
Did you know what thermal power production is?

Thermal power can be divided into combined heat and power (CHP) and separate electricity production or condensing power.

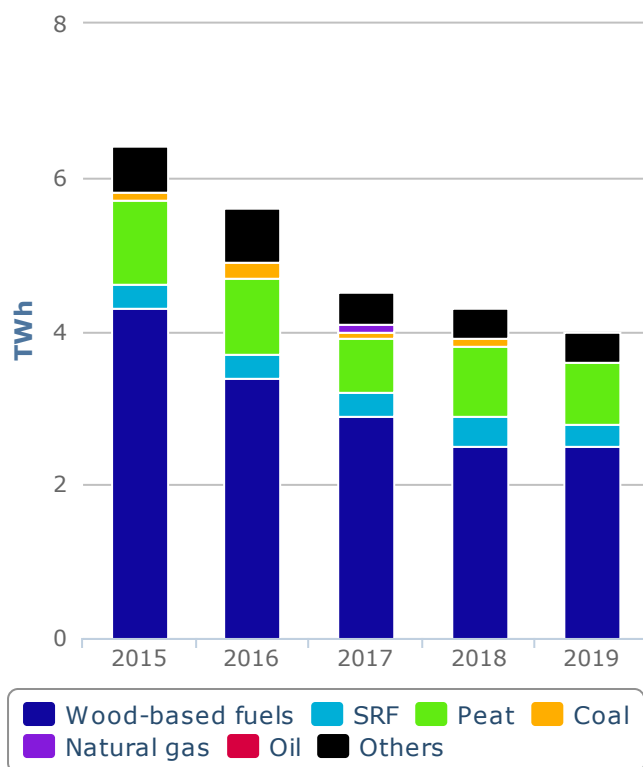
Almost one-third of all the electricity produced in Finland is produced by means of CHP, where the energy content of the fuel is used up as fully as possible. Heat produced at CHP plants is utilised as process steam and district heat. Up to 90% of the energy in fuel can be converted into heat and electricity in this way.

In CHP plants or condensing power plants, as large a share as possible of the energy contained in the fuel is converted into electricity. Most condensing power plants use coal as their fuel.

Pohjolan Voima's process heat and district heat production in 2015 - 2019, TWh



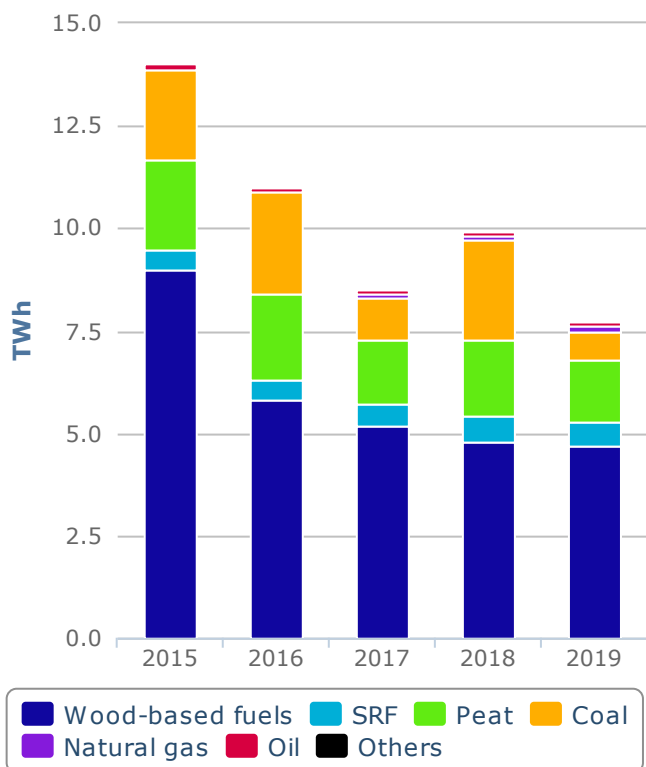
Pohjolan Voima's heat production, by energy source in 2015 - 2019, TWh



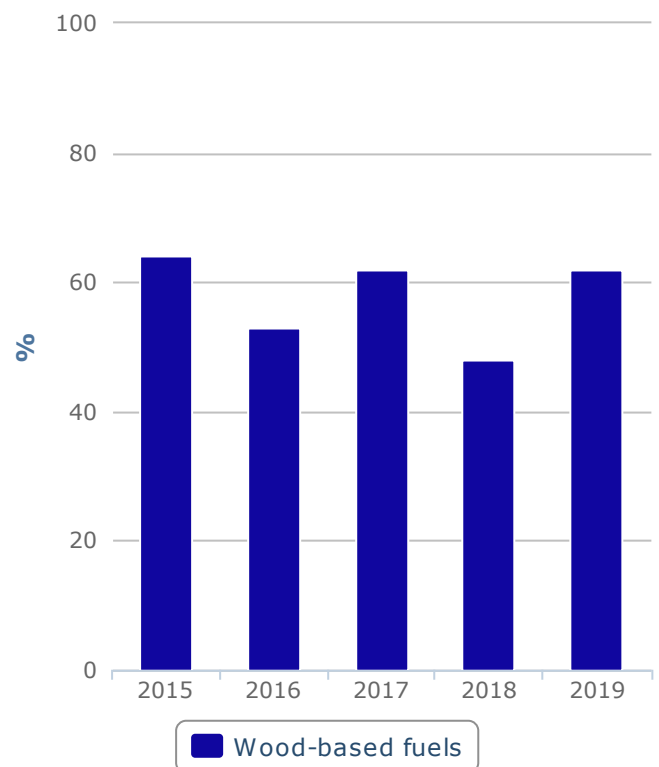
Did you know that we promote the circular economy by using the heat and by-products generated in industrial processes as our energy sources?

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 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.

Pohjolan Voima's fuels in heat and electricity production in 2015 - 2019, TWh



Share of wood-based fuels in heat and electricity production in 2015 - 2019, %



Nuclear power production

Teollisuuden Voima Oyj (TVO), a joint venture partially owned by Pohjolan Voima, operates a nuclear power plant at Olkiluoto in Eurajoki. The combined output of the nuclear power plant's two plant units is 1,780 MW.

Total production volume of the Olkiluoto power plant was 14.8 TWh in 2019. Pohjolan Voima's share of the production amounted to 8.4 TWh. The Olkiluoto nuclear power plant had the second best year of its history in terms of production. The OL1 plant unit reached the best result ever, and its capacity factor was 96.9%. The capacity factor of the OL2 plant unit was 92.7%.

For more information, please visit [TVO's website](#).



Responsibility

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

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.

The responsible operations are guided by responsibility policies approved by the Pohjolan Voima Board of Directors:

- Code of conduct
- Competition law policy
- Personnel policy
- Environmental and energy efficiency policy

Our responsibility programme, or action programme to develop responsible corporate operations, describes the current state of factors important to Pohjolan Voima's business operations and to its stakeholders, as well as development and monitoring needs. The responsibility programme includes factors that have been identified as important and have been placed under monitoring. Development measures have been established for some of these factors. These include climate change, biodiversity, reliable production and lifecycle management.

[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 2019, the focus areas were:

- Development of safety management
- Responsible value chain
- Circular economy

Good safety culture requires observations

We concluded a safety development project in 2019. The goals were to strengthen Pohjolan Voima's safety culture and develop the measurement and analysis of the actual safety level. During the project period, briefings on the development of the safety culture and on the significance of making observations were arranged for the employees. We also arranged training on fire risks in cooperation with TVO and our insurance company.

The strengthening of the safety culture can be seen as improved power of perception of Pohjolan Voima's personnel: each Pohjolan Voima employee was to make ten observations on safety, the environment or energy efficiency in 2019. The goal was reached: a total of 10.7 observations per employee were made.

We had set 1,350 observations as the combined goal for our own employees and the employees of our partners. We clearly reached this goal: a total of 2,087 observations were made. The figure does not include TVO's observations. Unfortunately, we did not reach our accident goal. Our goal is zero accidents, but Pohjolan Voima's employees were involved in two accidents that led to absence from work.

We ensure responsible operating methods throughout the value chain

We continued to develop responsible operating methods in our value chain. In the past few years, we have focused on auditing our fuel suppliers. Due to the conclusions of the safety development project, we decided to also focus on auditing responsibility of the rest of the supplier network in future. We studied the opportunity to join a HSEQ auditing cluster and made a decision to join the cluster as of the beginning of 2020.

We procure our fuel from reliable partners and regularly audit our fuel suppliers. Our wood-based fuels are by-products from forestry and the forest industry, and we follow a recommendation by Finnish Energy to secure the sustainability of our wood-based fuels. We have specified exact quality classes for recycled fuels, and our power plants only accept fuels that comply with these quality requirements.

We promoted responsible hydropower production through several voluntary cooperation projects which develop the management of the aquatic environment in our operating area, improve the quality of water, promote recreational use of water areas and work to restore the natural circulation of migratory fish. For more information on our cooperation projects, please see [the environmental section of our annual report](#).

We communicate our circular economy actions

In 2019, we actively strived to communicate information about our goals related to the circular economy. We explained through our communication channels how we are demolishing our coal-powered plants at Tahkoluoto in Pori and in Kristiinankaupunki. The end of a power plant's lifecycle is a major challenge in terms of the circular economy, and our goal is to achieve a high level of recycling in cooperation with our partners.

We have primarily attempted to utilise the power plants' components as such. They can be used as spare parts elsewhere, for example. Scrap iron is utilised as a raw material, concrete is used in earth construction

and other types of demolition waste are properly recycled. Almost all of the materials from the demolished power plants will be reused in one form or another.

The largest material flows during the operation of a thermal power plant are fly ash from combustion gas cleaning and bottom ash from boilers. The utilisation rates of these as materials in earth construction, for example, have remained high. In 2019, we prepared a new kind of cooperation between our power plants to determine new utilisation opportunities – we want to ensure that the principle of circular economy is realised in the case of fly ash also in the future.

We are ethical

Pohjolan Voima always conducts its business in an ethical manner and in compliance with legislation. Our operating principles include principles on human rights, labour rules and anti-corruption.

We are committed to complying with all applicable laws and regulations. We act with honesty and integrity in all our stakeholder relationships.

Legislation and operating principles to be followed in Finland include principles corresponding to the ten internationally recognised human rights, labour, environment and anti-corruption principles of the UN Global Compact. We require that our partners use corresponding principles, and we use applicable monitoring practices to support the development of responsible operations.

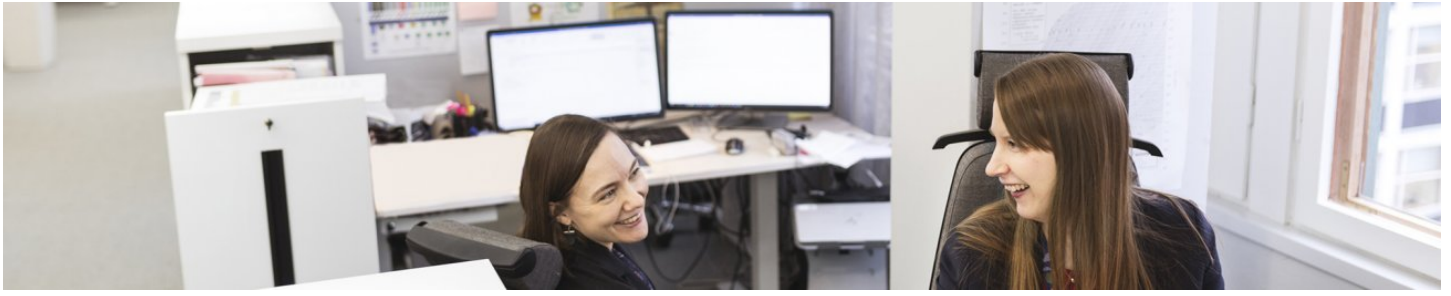
We use fair employment practices. We respect diversity, and we do not discriminate against anyone on the basis of age, gender, ethnic background, beliefs or any other personal attributes. We do not condone harassment, bullying or any other form of unfair treatment. Pohjolan Voima has an equality and non-discrimination plan.

We do not take advantage of our position or any information received through our work for personal gain, and we transparently announce all of our commitments. We do not condone corruption or bribery.

Pohjolan Voima has in place a procedure for reporting any activities violating the code of conduct or suspected abuse of insider information.

We take care of the company's property and resources, and only use them to achieve our business goals. We protect confidential information, information systems, and tangible and intangible assets owned or managed by Pohjolan Voima from damage and misuse. We carry out our work in a responsible and professional manner.

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.



Personnel

Pohjolan Voima's energetic, competent and committed employees enable the company's success in the challenging and transformation of the energy industry.

One of the strategic focus areas of the Pohjolan Voima Group is an energetic attitude, which aims at enabling the implementation of the strategy and the development of a functional corporate culture. The main energetic attitude themes in 2019 were myself as a reformer, my supervisor as a reformer and us a reformers.

Strategy prepared in cooperation with employees

Pohjolan Voima completed extensive work on its strategy in 2019. The strategy work started with an analysis of the operating environment. All of the employees participated in the surveying of the operating environment. We arranged an employee strategy event in the spring with discussions and teamwork on themes such as the underlying assumptions behind the strategy and determination of the vision and mission. The employees also participated in the work on the strategy through discussions in shared electronic discussion forum Viima.

The parent company's Board of Directors approved the strategy in the summer of 2019. Efficient implementation of the new strategy and the strategic themes requires a review of Pohjolan Voima's administrative model, operating model, forums, strategic skill requirements and organisational structure. For this reason, employee co-operation negotiations were initiated in the company in late 2019. A new organisational model and a new operating model, both of which promote cooperation, were published after the negotiations. In future, we will control our operations more based on processes.

Positive development in the field of safety observations

Pohjolan Voima's corporate culture and operating methods are based on the values that have been determined together with the employees: skilfully, boldly, together. The values guide everything we do. The "skilfully" value also covers the fact that we always work safely.

In 2019, our goals were strengthening Pohjolan Voima's safety culture, increasing the safety level and motivating employees to make more safety observations. The development of safety indicators and analyses in the entire Group clearly increased the number of safety observations made by the employees. On average 10.7 safety, environmental and energy efficiency observations per employee were made in 2019, compared to 1.4 the previous year.

Pohjolan Voima has good team spirit

We implemented a new kind of personnel satisfaction survey in the Pohjolan Voima Group, using Corporate Spirit's PeoplePower® concept. The response rate of the Group's employees was extremely high (83.3%) and the response rate of the parent company's (Pohjolan Voima Oyj) employees was 88.2%, which reflects the willingness of the employees to participate in the development of the company and its operations.

According to the personnel satisfaction survey results, our strengths include good team spirit and strong investments in the wellbeing of personnel, tools, workspaces and ergonomics, as well as performance-related aspects: good prerequisites for doing your job, effectiveness and flexibility at the unit level, and excellent operating culture in the entire company.

Due to the excellent personnel satisfaction survey results, Pohjolan Voima received an honourable mention in the Most Inspiring Employers in Finland 2019 competition. It is a unique recognition in Finnish working life that can only be achieved by Finnish organisations which reach optimal results and use Corporate Spirit's personnel satisfaction survey concept.

The results of our Työvire survey on personnel's well-being were also excellent in early 2019. According to the survey results, our strengths include doing meaningful work. Giving and receiving feedback was emphasised as a development area. We arranged feedback training for all employees to develop the feedback culture.

We develop competence

The goal with the personnel training and development actions is to verify the implementation of Pohjolan Voima's strategy by strengthening the key strategic skills and competencies. The strategic skills are asset management, ability to operate efficiently on the market, innovation skills, a customer-centred approach, management of networks, good performance and ability to renew. They are emphasised in our Voima Academy, which brings together all training courses and events supporting our strategic skills. On average, the employees were in training for four days in 2019 (four days in 2018).

Goal-orientation, profitability, self-management and management by coaching were our skills development focus areas in 2019. All of our experts attended a self-management training course. The practice of Friday briefings continued. The Friday briefings covered themes promoting the strategic skills and other themes that develop the work community.

All supervisors attended a training course in management by coaching. The supervisors determined their management goal as "our management is clear, systematic and well-organised". The supervisors also gave management promises. Monthly supervisor discussions were arranged to support the supervisors. During these discussions, the supervisors received the latest news and had the opportunity to ask questions and point out development areas, as well as discuss the challenges of supervisory work.

Personnel development is also supported by means of performance reviews and intermediate performance reviews, as well as coaching discussions. The latter are arranged as necessary. A special theme in the 2019 intermediate performance reviews was the preparation of personal development plans.

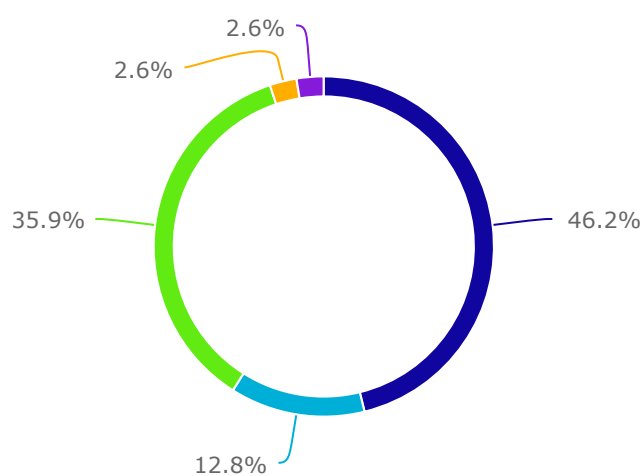
Key personnel figures in 2019

At the end of 2019, we employed 87 (in 2018: 105) people, of whom nine (15) had a fixed-term employment relationship. The number of workers increased by one person from 2018, and the number of office employees decreased by 19 people from the previous year.

Pohjolan Voima Oyj sold its energy management service business in Harjavalta to Power-Deriva Oy on 8 June 2018. The asset deal took effect on 1 January 2019. In connection with the asset deal, all the employees of Pohjolan Voima Oyj working in energy management in Harjavalta transferred to Power-Deriva as existing employees.

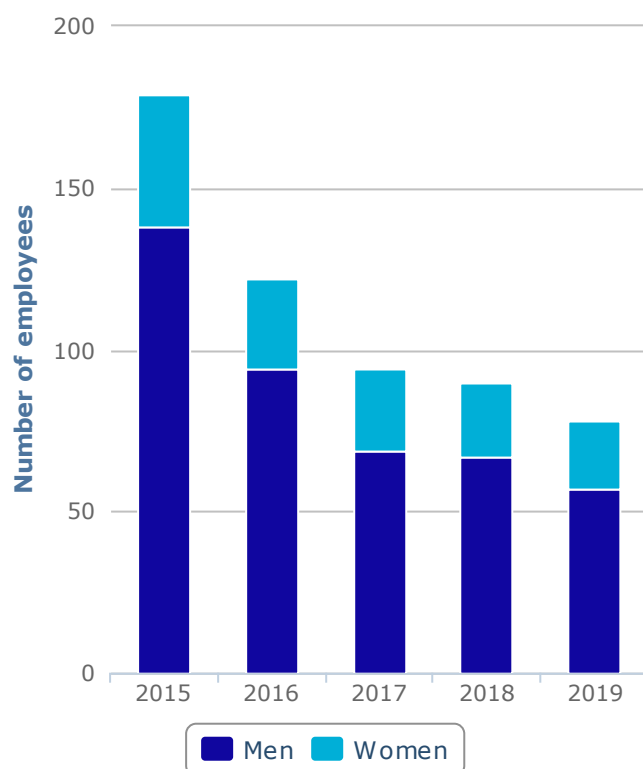
Our prevailing working time arrangement is full-time work. At the end of 2019, a total of 5.7% of the employees were part-time employees. The company employed five summer employees in 2019. In 2019, the average age of the permanent employees was 45 years (45), and 26.9% (25.6%) of the employees were female. The total turnover of permanent employees in 2019 was 3.3% (13.3%).

Number of personnel by Group companies on 31 Dec 2019, in permanent employment, total 78

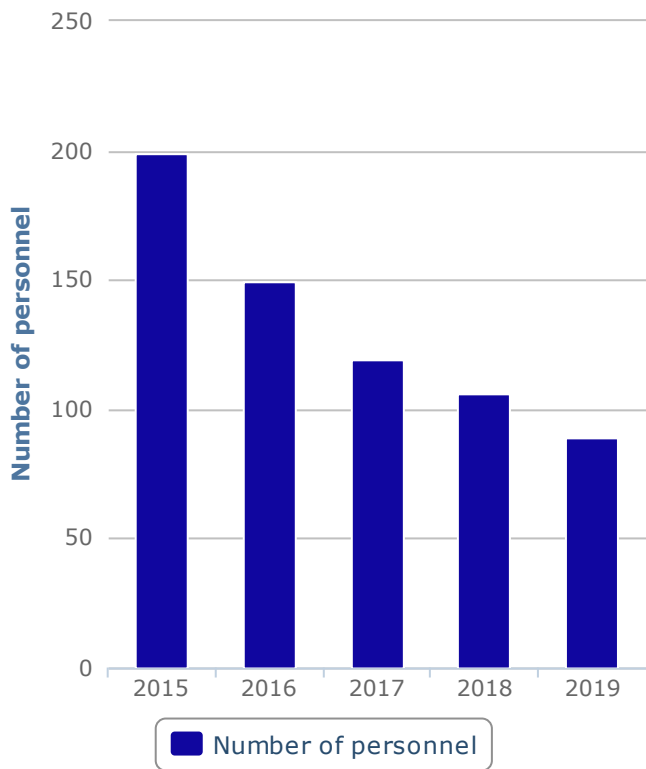


■ Pohjolan Voima Oyj, 36
■ PVO-Vesivoima Oy, 10
■ Laanilan Voima Oy, 28
■ Kymin Voima Oy, 2
■ Kaukaan Voima Oy, 2

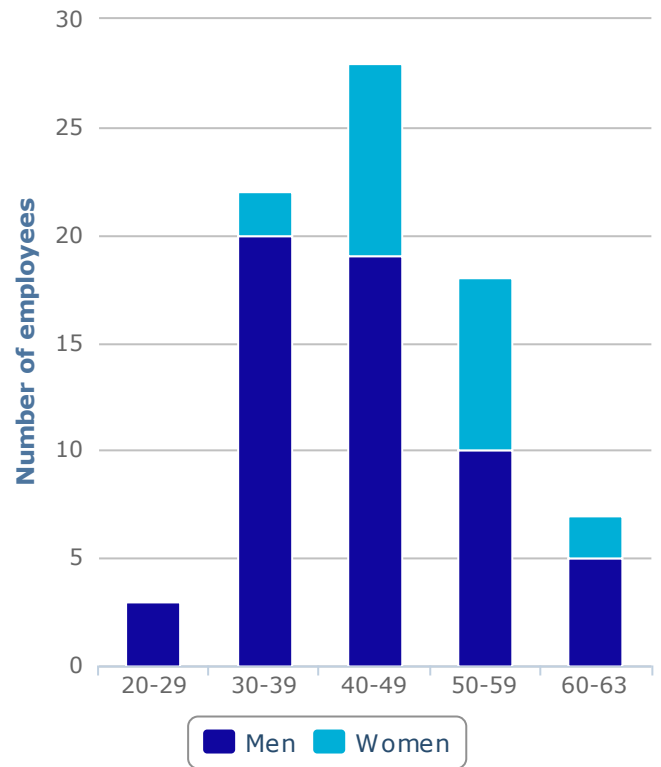
Number of personnel on 31 Dec in 2015 - 2019, in permanent employment



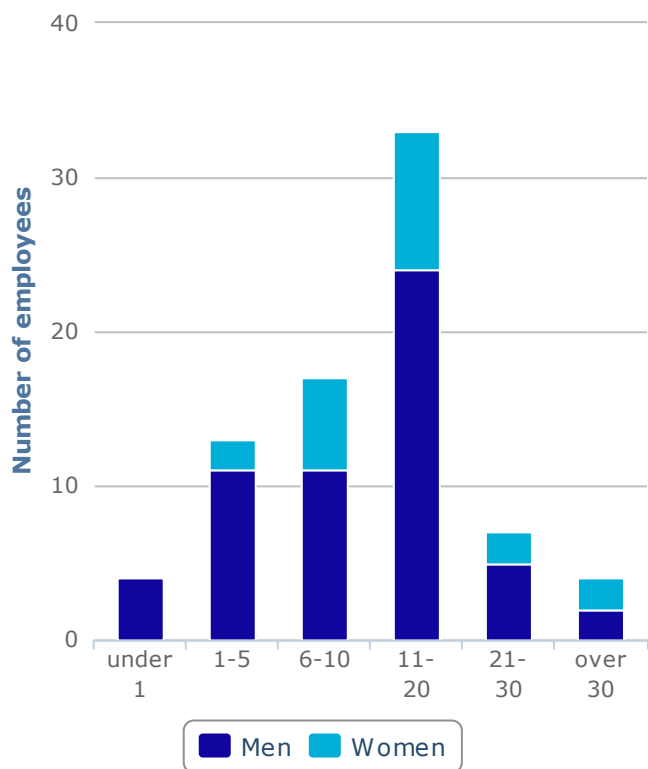
Average number of personnel in 2015 - 2019, in permanent employment and on fixed-term contracts



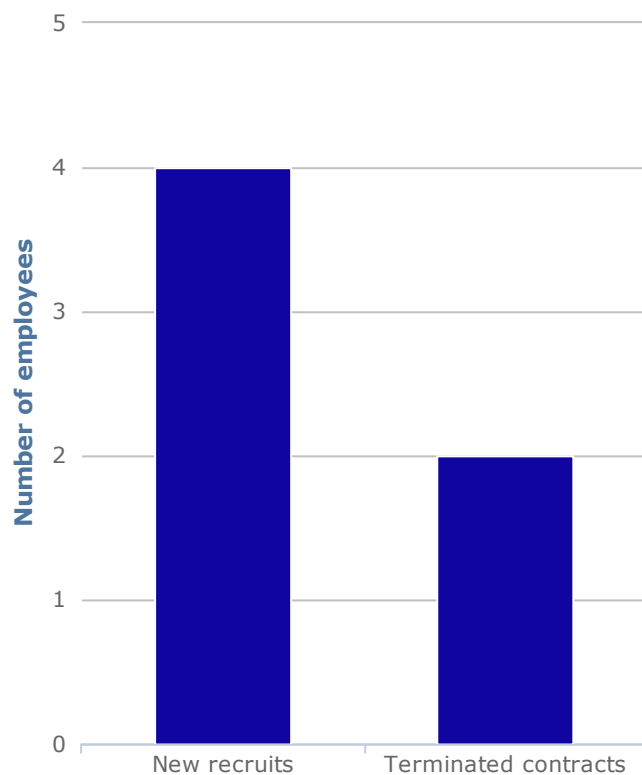
Breakdown of personnel by age on 31 Dec 2019, in permanent employment



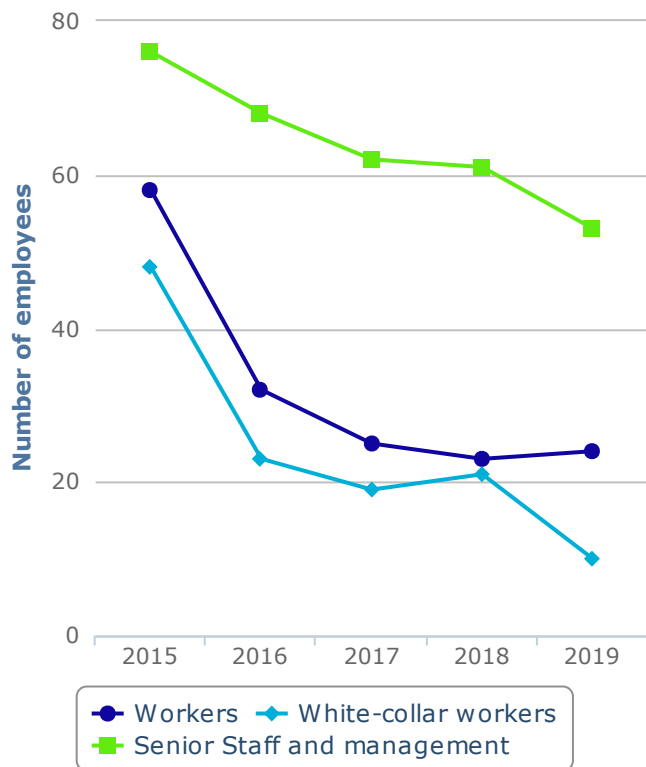
Years of employment on 31 Dec 2019, in permanent employment



Employee turnover in 2019, in permanent employment



Personnel by personnel group in 2015 - 2019, in permanent employment and on fixed-term contracts





Environment

A basic requirement for persistent, long-term energy production is the maintenance of 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, all natural values related to our operations and any 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 in all of our energy production modes and 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. This helps to ensure the achievement of environmental objectives and continuous improvement of operations. In addition, all of our production companies use the energy efficiency system ETJ+ or the energy management system ISO 50001. Some of these systems are certified. Our production companies have also signed energy efficiency agreements for the period 2017–2025. Furthermore, the environmental management system of TVO (a joint venture of Pohjolan Voima) is EMAS-registered.

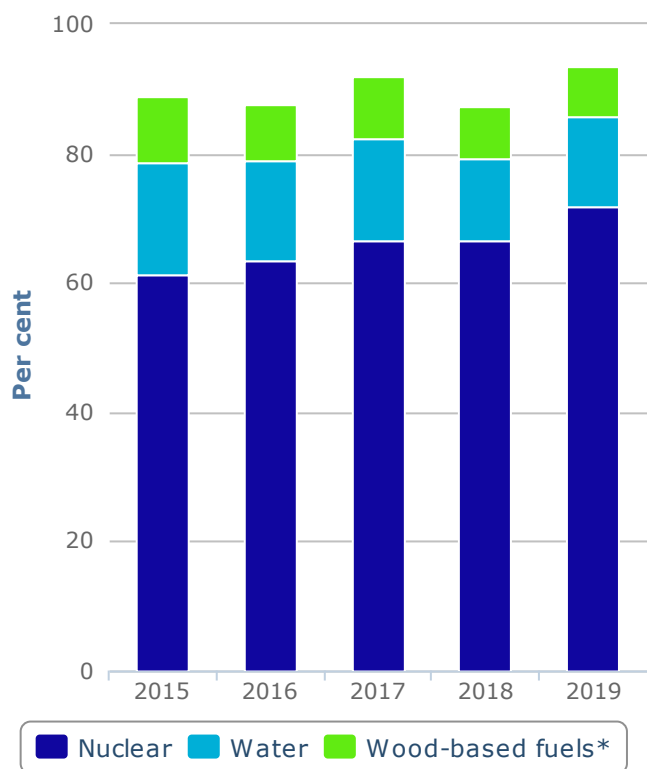
We aim at carbon neutrality of more than 95% in electricity production

Electricity production forms in Pohjolan Voima's portfolio that are considered to be carbon neutral are hydropower and nuclear power, as well as electricity produced with carbon-neutral wood fuels in thermal power plants. Our goal is to increase the share of carbon neutral energy sources to over 95% in our electricity production in 2020.

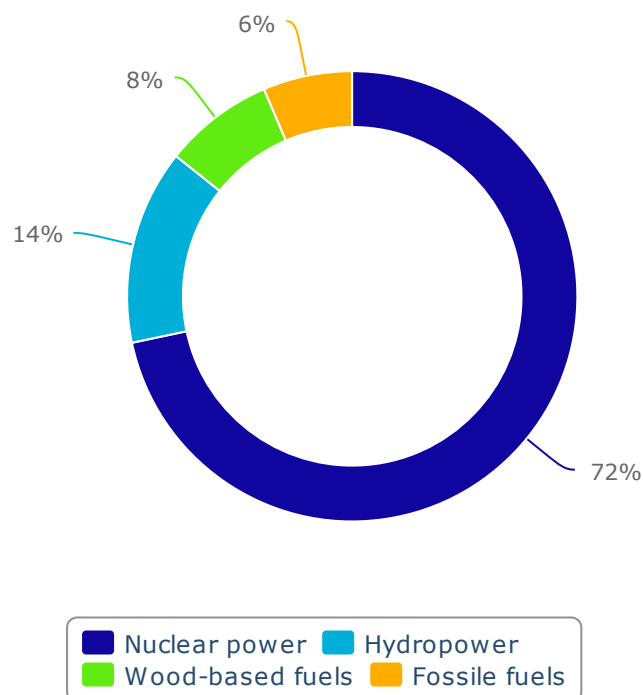
In 2019, 94% of our electricity production was carbon neutral. The increased share of carbon neutral production was due to the fact that the share of nuclear power increased and the combustion of coal and peat decreased. The share of carbon neutral electricity production capacity is on the increase. Capacity increases have risen the share of nuclear power and hydropower among the carbon neutral energy sources, and we have ceased separate production of electricity with coal. Furthermore, regular electricity production of the OL3 EPR plant unit in Olkiluoto is expected to start in 2021.

Carbon-neutral sources of Pohjolan Voima's electricity production in 2015 - 2019, per cent

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



94% carbon neutral electricity production in 2019



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

Hydropower production has regional and local effects 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 hydropower company PVO-Vesivoima stocked around 2.2 million fry in 2019. Of these, 0.6 million fry were used to stock the Kemijoki sea and river area. This amounted to 17% of the total of 3.4 million fry stocked together with Kemijoki Oy.

Did you know? Challenges with the transfer of river lampreys past dams into rivers

After a one-year transfer ban was lifted, the transfer of river lampreys continued normally in the Iijoki river. No actual transfer of river lampreys took place in the Iijoki river in 2018, because infectious haematopoietic necrosis (IHN) had been detected in fish of the salmon family in the sea area. In 2019, a total of 45,000 river lampreys were transported. This was less than the goal of 60,000 specimens. As the transfer was successful in the previous years, however, the obligation balance showed a surplus at the end of 2019.

In the Kemijoki river, the joint obligation of PVO-Vesivoima and Kemijoki Oy is 100,000 transferred specimens. A total of 58,000 river lampreys were transported in the Kemijoki river in 2019. Weather conditions and the dry early autumn deteriorated the river lamprey catches. The river lampreys stopped rising somewhat earlier than normal due to the cooling of the water in late autumn.

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, we have increased, together with Kemijoki Oy, the volume of river lampreys being caught at the Isohaara power plant. The results from new catching locations and methods have been encouraging, but the catching of river lampreys needs to be further developed. New solutions are currently being planned.

Visit our website for [more information on the fish stock management](#).

In 2019, inspections according to the Dam Safety Act, held regularly every five years, took place at the dams of the Melo and Maalismaa power plants. A leak detected in the retaining earth dam of the Melo power plant in 2016 was further repaired by grouting in 2019. The grouting did not result in as final and reliable solution as was hoped for. A plan on the final repair method was completed in 2019, and the repair work should be started in 2022. The repair work has not affected the environment or the electricity production operations at the power plant.

We work with partners to restore migratory fish

In January 2019, our hydropower company PVO-Vesivoima signed an agreement on the Iijoki river cooperation with municipalities of the Iijoki region, Metsähallitus, the Centre for Economic Development, Transport and the Environment for North Ostrobothnia, and peat producers. The Iijoki agreement is a continuation to a water system vision project called Ijoen otva that was launched by the Oulu Regional Council in late 2015 and concluded at the end of 2018. The EU was a co-financier of the project. With the agreement, the parties agreed on the implementation of an Iijoki river vision and action plan for 2019–2023, as well as on the establishment of an advisory board and a steering committee on the Iijoki river.

Excellent cooperation in the Iijoki river in a migratory fish spearhead project

Our hydropower company participates in Finland's largest three-year migratory fish spearhead project in 2017–2020. The project's action plan includes the following:

- Fishway for Raasakka power plant
- Downward migration solutions for smolt (young salmon and trout)
- Fry transplanting programme
- Fish transfers
- Measures to be implemented in 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.



Finland's first downward migration solution in Haapakoski

The first fence to guide smolt (young salmon and trout) in Finland was installed in the summer of 2019 in the top channel of our Haapakoski power plant as part of the Iijoki river migratory fish spearhead project. Researchers of the Natural Resources Institute Finland will be testing the fence in 2020 and 2021.

A guiding fence and a downward migration route create a migration route through which smolt can be guided past power plants. The construction plan for the downward migration route should be completed in spring 2020.

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 planned fishways at Raasakka. The application was supplemented in November 2019 with new plans.



Cooperation to develop old riverbed in Raasakka

We develop the old natural riverbed of the Iijoki River at Raasakka with local partners. The project, ending in 2021, aims to improve the flow conditions and water quality, as well as to improve the state of the fish stocks and promote recreational use of the area.

In summer 2019, we added water to the Uiskari fishway to boost the rising of fish. Promising results of the fishway have been received.

Some horsetail and willow bushes have been removed from the old riverbed, and a boat ramp has been restored. Previously, beaches were restored and new recreational paths were 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 the authorities. The year-round ecological flow that was already in use at the Kostonjoki river, at least two cubic metres per second, was confirmed with a cooperation agreement in 2018.

A similar cooperation agreement for the Iminjoki river was confirmed in 2017. 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.

During the spring floods, an ecological flow of two cubic metres per second was drained in the Iminjoki river in accordance with the agreements. The monitoring period of the Iminjoki river agreement ended at the end of 2019. Because some of the criteria specified in the agreement were not met, the ecological flow during the spring floods will be 3.5 cubic metres per second for the next three years (2020–2022).

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

We participate in a committee coordinated by the Regional Council of Lapland, the operation of which continued after the related agreement was updated at the end of 2017. In future, the migratory fish committee will focus on promoting the actions laid down in the action plan prepared during the first term and on updating the action plan.

Change application of the authority on stocking and fish stock management obligations

In March 2017, the Centre for Economic Development, Transport and the Environment for Lapland (ELY Centre) filed a change application with the Regional State Administrative Agency for Northern Finland concerning stocking and fish stock management obligations with regard to the Kemijoki river. In October 2017, the ELY Centre filed a similar application concerning the Iijoki river. In addition to entirely new requirements, this involves additions to the current obligations. The Regional State Administrative Agency did not announce the applications during 2019.

Development of regulation on the areas affected by the Jumisko power plant is being investigated

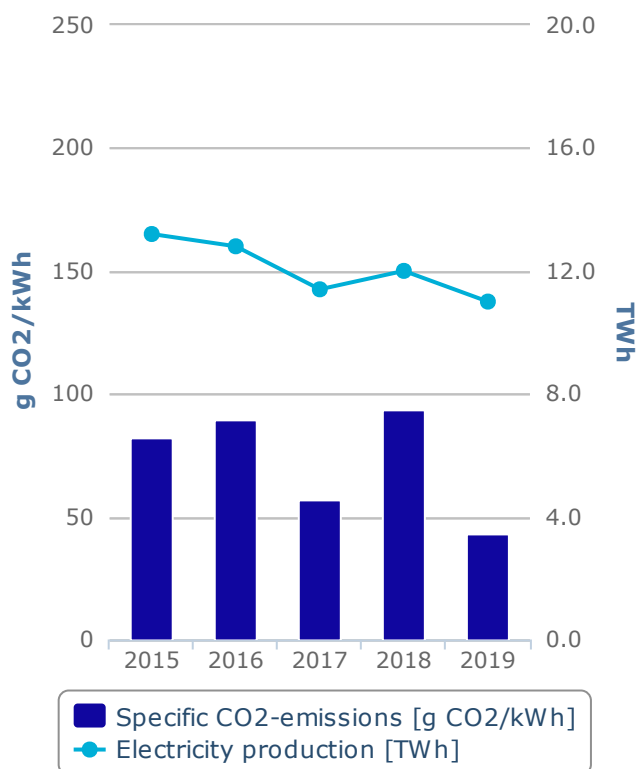
The Lapland Centre for Economic Development, Transport and the Environment initiated a regulation assessment in compliance with the Water Act on the areas affected by the Jumisko power plant in 2019. The authority arranged a kickoff meeting and an open survey on the development assessment. The ELY Centre will continue with the preparation of the assessment.

Emissions from thermal power decreasing

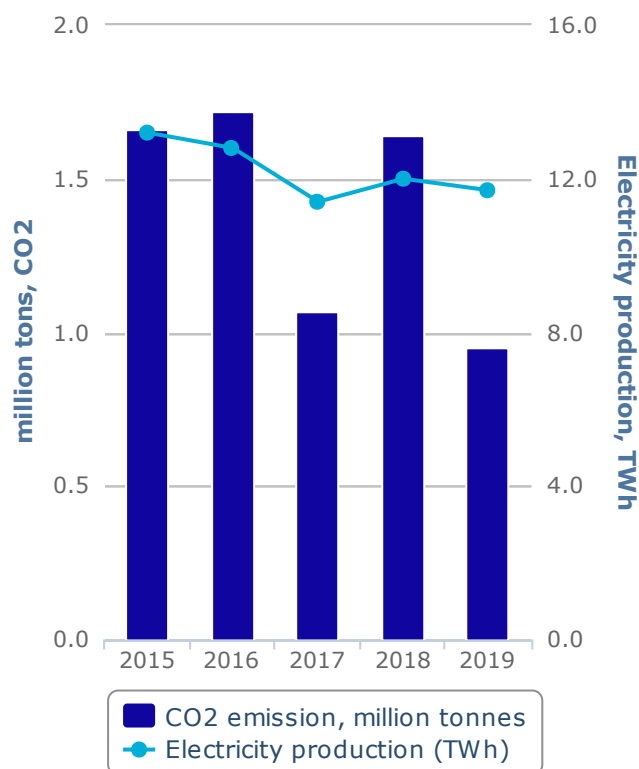
Our thermal power plants use wood-based fuels, solid recycled fuels, peat and coal as their primary fuels, and small amounts of natural gas and oil as auxiliary startup and backup fuels. The most significant environmental impact of thermal power production concerns the atmosphere. The power plants' emissions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

In 2019, carbon dioxide emissions from the production of electricity and heat amounted to 0.9 million tonnes. Since 2014, the CO₂ emissions have been on the decrease, mainly due to the fact that less coal is used. In 2019, characteristic CO₂ emissions from our electricity production were 44 g CO₂/kWh.

Pohjolan Voima's specific carbon dioxide emissions from electricity production in 2015 - 2019

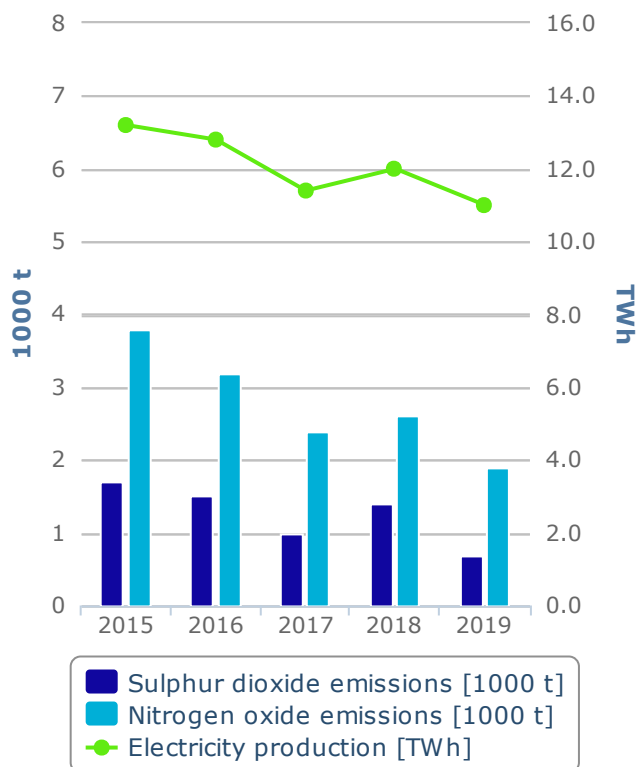


Pohjolan Voima's carbon dioxide emissions from heat and electricity production in 2015-2019

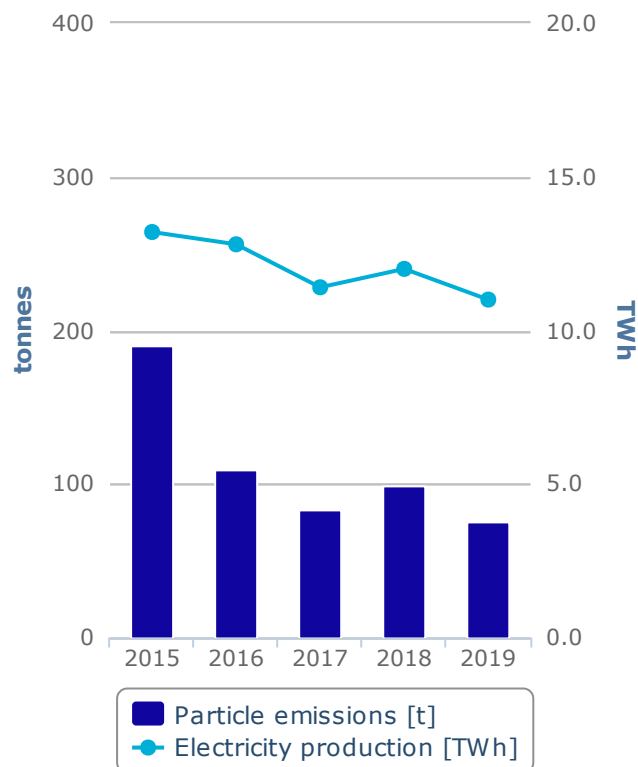


Other emissions into the air also decreased from the previous year. Sulphur dioxide emissions amounted to 0.7 thousand tonnes, nitrogen oxide emissions to 1.9 thousand tonnes and particle emissions to 0.1 thousand tonnes.

Acidifying emissions from Pohjolan Voima's heat and electricity production in 2015 - 2019



Particle emissions from Pohjolan Voima's heat and electricity production in 2015 - 2019



As the result of the Industrial Emissions Directive, BAT conclusions made on the basis of the Best Available Techniques reference documents became binding. The BAT conclusions related to the reference document on best available techniques for large combustion plants (LCPs) were published on 17 August 2017. Power plants the main field of activity of which is energy production have for years from now to adjust their operations to the conclusions.

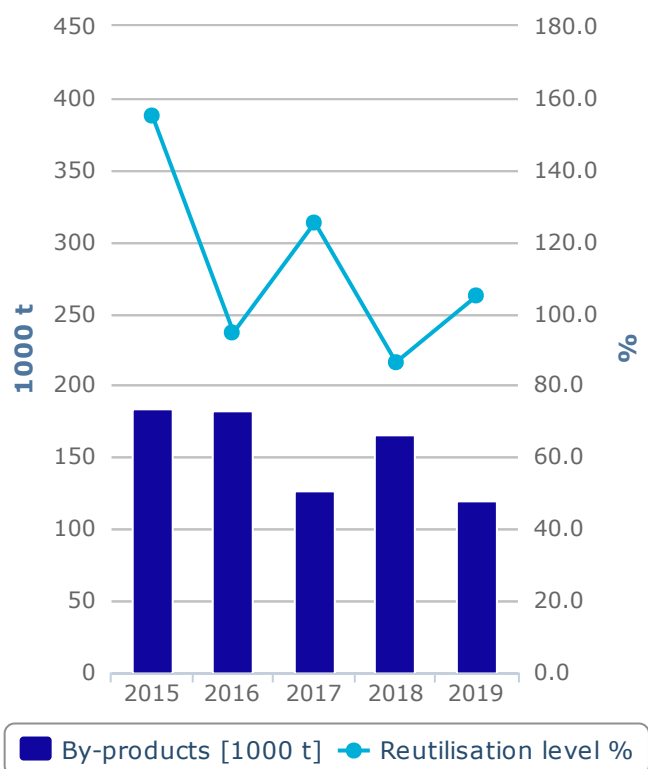
The first power plants prepared their applications for the review of their environmental permits in 2018, and the licensing work continued in 2019. The emission limits will be stricter for new environmental permits.

Utilisation of by-products at a good level

Our power plants generated a total of 121 thousand tonnes of fly ash and gypsum from the combustion gas cleaning processes and bottom ash from boilers. In 2019, 105% of the by-products were reused in earth construction, as forest fertilisers or in the construction industry. Any fly ash that is not immediately reused can be put into intermediate storage and reused at a later date. Hence, the utilisation rate is sometimes more than a hundred per cent.

Our goal is to reuse as much as possible of the by-products of thermal power production as raw materials to replace non-renewable natural resources, such as rock and stone.

Usage of by-products and reutilisation levels in 2015 - 2019



Nuclear production complied with environmental permits

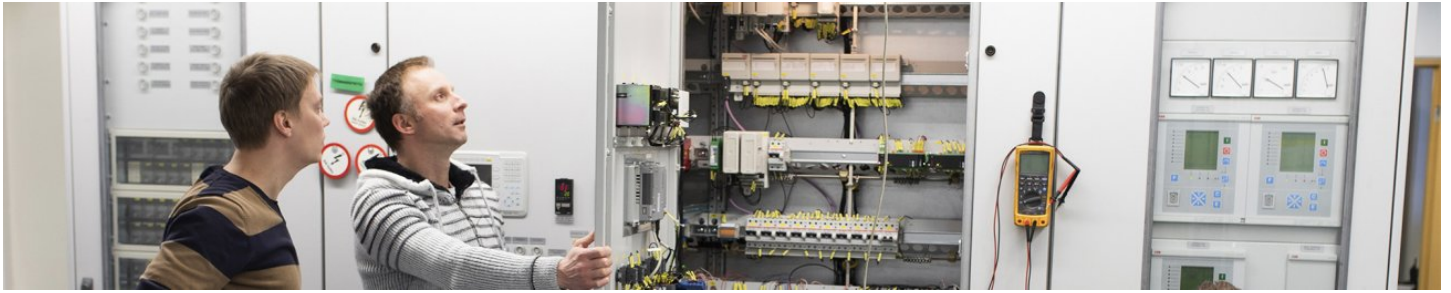
Operations of the Olkiluoto nuclear power plant, which is owned by TVO, a joint venture partially owned by Pohjolan Voima, complied with legislation, environmental permits, the environmental management system and the energy efficiency system in 2019.

The most major environmental impact from the Olkiluoto nuclear power plant is local warming of the sea area close to the nuclear power plant. During the reporting year, the power plant produced 14.75 TWh of electricity, and the cooling water temperature remained within the environmental permit limits.

The environmental load caused by the Olkiluoto nuclear power plant was low. The operations were developed in accordance with the environmental permits and the requirements of the environmental management system. In accordance with the principle of continuous improvement, goals for the operations are specified in an environmental programme that is regularly monitored by a team consisting of expert from different fields. TVO has also signed an energy efficiency agreement. The savings target for the 2017–2025 agreement period is 150 GWh.

Environmental matters related to the nuclear power production, environmental indicators and the results of the environmental programme for 2019 are reported in more detail in TVO's responsibility and environmental report. The data has been verified by a third party.

Read more at [TVO's website](#).



Projects

In accordance with our strategy *Decisive Power*, we are proceeding based on market terms towards carbon neutrality, aiming for a competitive edge based on our regulation capability and becoming a top expert in the management of our production assets. We manage the entire lifecycle of our power plants. At present, more than 90% of the electricity we produce is carbon neutral, and we aim to exceed 95% in 2020.

Our most important investment project is the Olkiluoto 3 EPR nuclear power plant project of our joint venture TVO, which is Finland's most significant contribution to the climate effort. In the case of hydropower, we completed a reform of the electricity and automation systems at the Raasakka power plant and made a decision to overhaul the Jumisko hydropower plant in the Kemijoki river in 2021. In the case of thermal power, we invested in solutions to improve the competitiveness, flexibility and efficiency of energy production at our plants, reducing emissions at the same time.

Modernisation of the electricity and automation systems at the Raasakka hydropower plant completed

We completed the modernisation project of the electricity and automation systems of our lowermost hydropower plant in the Iijoki river, Raasakka. The modernisation improves the availability and boosts the energy efficiency of the power plant, as well as makes the production of regulating power more efficient. Regulating power balances out the difference between the demand for electricity and the production volume.

In the reform, we replaced the power plant's original systems with modern technology. The turbines and generators were also serviced.

Overhauling Jumisko hydropower plant in the Kemijoki river

We made a decision to invest in the overhaul of the Jumisko hydropower plant in the Kemijoki river in 2021. The investment will increase the power and energy efficiency of the Jumisko hydropower plant, and improve the power plant's capability of producing electricity flexibly at the correct time.

The power plant's turbine, which dates back to the 1950s, and the electricity and automation systems will be replaced and the generator will be overhauled.

The investment is part of a systematic renovation programme of our hydropower plants. The renovation programme maintains the good condition of our plants, minimises the risk of environmental damage and improves the capability of our plants to support the functionality of the electricity system by providing regulating power.

To read more on the Jumisko renovation, visit our [website](#).

Extensive annual maintenance at the Laanilan Voima power plant in Oulu

In May and June 2019, the Laanilan Voima power plant underwent extensive annual maintenance where all of the power plant's moving components were inspected and maintained. The goal was ensuring availability and safe operation of the power plant. The annual maintenance also improved the power plant's energy efficiency and provided environmental benefits.

We started the demolition of the coal-fired power plants in Kristiinankaupunki and Tahkoluoto, Pori

We will completely demolish the coal-fired power plants in Tahkoluoto, Pori and Kristiinankaupunki by the end of 2020.

The power plants were closed down in 2015, because the operations were unprofitable. The final decision on the decommissioning of the plants was influenced by our commitment in increasing carbon neutral production.

The demolition work started in the spring of 2019. Most of the demolition waste will be recycled. New use for the power plant area in Kristiinankaupunki is being developed in cooperation with local companies.

More than forty ongoing development projects

To achieve our strategic goals, we have initiated a host of development projects involving carbon neutrality, regulation capability and management of the production assets. In 2019, we had more than forty ongoing development projects with which we aim for new solutions and strive to decrease our emissions and lifecycle costs, as well as to improve our operational reliability, efficiency and flexibility.

We are searching for means to further improve the utilisation of fuels at our combined heat and power plants so that we could restrict the use of peat and fossil fuels to startup and backup fuels whenever the market situation allows.

We develop the regulation capability of our operations and improve our lifecycle cost management and production processes. We also consider the circulation economy goals in our projects.

In the development work, we utilise the new opportunities offered by digitisation and knowledge-based management. We invest in smart systems and low threshold pilot projects that we implement in cooperation with our partner networks.

For example, a project aiming at better management and thus increased utilisation of recycled fuels is ongoing in Hämeenkyrön Voima. We use data, new sensors and analysis tools to improve predictability and fuel management.

A pilot project by Rauman Biovoima uses proactive condition monitoring, data analysis and machine learning to detect potential future problems and thus avoid production interruptions.

Case:



Advanced combustion management increases energy efficiency and reduces emissions

Adjustments of the combustion conditions in the boilers of the Kaukaan Voima and Kymin Voima power plants were made using significantly improved process management technology. The cost-efficient solution reduces the generation of nitrogen oxides in the boilers and improves the power plants' energy efficiency.

[Visit our website to read more](#)

Case:



New turbine regulators for Iijoki in cooperation with the University of Oulu

An innovation developed by PVO-Vesivoima and researchers from the University of Oulu enables much faster and more accurate control of the electricity production at a hydropower plant. A totally new type of turbine regulator created by the collaboration project has been commissioned at three hydropower plants in the Iijoki river.

[Read more about the collaborative three-year project on our website](#)

Olkiluoto 3 EPR plant unit preparing for production operations

Preparations at the Olkiluoto 3 EPR plant unit for production operations continued in 2019. Most of the construction work for the plant unit is complete. The installation of electrical and instrumentation and control system (I&C), as well as mechanical system is still in progress. During the hot functional testing (HFT) in the spring of 2018, it was detected that a pressuriser surge line in the reactor coolant circuit was vibrating. STUK approved the solution to eliminate the vibration in May 2019, and the absorbers have been installed. STUK will approve structures before the loading of nuclear fuel into the reactor.

According to the updated schedule provided by the plant supplier Areva-Siemens Consortium in December, nuclear fuel will be loaded in the reactor of the OL3 EPR plant unit in June 2020, the plant unit will be connected to the national grid for the first time in November 2020 and regular electricity production will start in March 2021.

The Government granted the plant unit an operating licence in March 2019.

For more information, please visit [TVO's website](#).

Cornerstone of Posiva's disposal facility for spent nuclear fuel laid

Posiva has started the construction of a production facility for the handling of spent nuclear fuel. The facility will consist of an encapsulation plant and a final disposal facility. The project will handle the construction of the encapsulation plant as a whole, the required supplementary excavation works for the final disposal facility, the installation of the systems required to start final disposal operations, the operating licence process and the preparation of the supply chains required for the production operation.

The cornerstone for the Posiva encapsulation plant was laid on 23 September.

Posiva Oy is responsible for the final disposal of the spent nuclear fuel generated at TVO's Olkiluoto nuclear power plant and Fortum's Loviisa nuclear power plant in Olkiluoto in Eurajoki.

For more information, please visit [Posiva's website](#).



Corporate Governance Statement 2019

1 Corporate Governance

Pohjolan Voima Oyj and its subsidiaries form the Pohjolan Voima Group. Registered office of the Group's parent company, Pohjolan Voima Oyj, is Helsinki, Finland. Pohjolan Voima Oyj is a public limited liability company. Under its articles of association, the company acquires energy for its shareholders and engages in other related activities. The company also may own shares and assets as are required or necessary for carrying on its business.

According to the articles of association, Pohjolan Voima supplies energy to its shareholders at cost price (the Mankala principle), i.e. Pohjolan Voima delivers the energy it has produced or acquired to its shareholders in proportion to their ownership of each series of shares. Each shareholder of the series of shares in question is responsible for the annual variable and fixed costs defined in more detail in the articles of association. The parent company's administration costs are covered by charging them as part of the fixed annual costs in a manner specified in more detail in the corporate documents.

According to the articles of association, the liability of each shareholder for the annual costs is always limited to the amount corresponding to the proportion of their shareholdings in all the shares in the series in question, and the failure of any other shareholder to satisfy the responsibilities of the shareholder for costs in proportion to the shareholder's shareholding shall not increase any non-defaulting shareholder's liability. The shareholders are responsible for the costs defined in Clause 4 of the articles of association.

Pohjolan Voima Oyj's General Meeting issues directives to the Board of Directors on the composition of the Boards of Directors of the subsidiaries and, if necessary, certain decisions by the subsidiaries. The parent company's Board of Directors and the Corporate Executive Team discuss the main principles of the Group's operations. The parent company participates in the management and supervision of its subsidiaries and affiliated companies through its representatives appointed to the governing bodies of these companies. The Group's subsidiaries and affiliated companies have their own governing bodies as well as some task forces and corporate documents.

Pohjolan Voima's governance is based on legislation and its corporate documents. As an unlisted public limited liability company, Pohjolan Voima is under no obligation to comply with the Corporate Governance Code. According to the Securities Markets Act the issuer of a security subject to public trading must provide a corporate governance statement in its annual report or separately.

2 Annual General Meeting

The General Meeting is the company's highest decision-making body. The Annual General Meeting of Shareholders decides on statutory matters, elects the members of the Board of Directors, in accordance with the procedure specified in the corporate documents, confirms the fees of Board members and names an auditor. Furthermore, the annual general meeting issues binding directives to the Board of Directors regarding the elections of the ordinary and deputy members of the Boards of the subsidiaries. If necessary, the Annual General Meeting also issues

binding directives to the Board on major investments of the subsidiaries and the other matters specified in the articles of association.

Any Extraordinary General Meeting decides on the matters for which the meeting has been convened at any given time.

The Annual General Meeting must be held annually by the end of June. An invitation to the annual general meeting will be sent to the shareholders at the earliest four weeks and at latest two weeks before the meeting.

Pohjolan Voima's Annual General Meeting was held on 21 March 2019. The Annual General Meeting approved the financial statements of Pohjolan Voima Oyj for 2018, discharged the members of the Board of Directors and the President and CEO from liability, as well as elected ordinary and deputy Board members for the new term.

3 Board of Directors

Composition of the Board of Directors

The members of the Board of Directors are elected annually at the General Meeting of Shareholders. According to the Articles of Association, the Board consists of a minimum of five and a maximum of 13 ordinary members. Personal deputies for the Board members may be named. The annual general meeting of 21 March 2019 elected nine Board members and their personal deputy members. The elected Board members with their consent were CFO Tapio Korpeinen, CFO Seppo Parvi, Group General Council Jukka Hakkila, Head of Finance & Control and Strategy Tomi Sederholm, Managing Director Anders Renvall, CEO Esa Kaikkonen, President and CEO Rami Vuola, Category Manager Energy Mikael Surakka and CEO Mikko Rintamäki.

From 1 January to 21 March 2019, the Board consisted of Tapio Korpeinen (chair), Seppo Parvi, Jukka Hakkila, Anders Renvall, Tapani Sointu, Esa Kaikkonen, Rami Vuola, Heikki Liukas and Patrick Wackström.

In its organising meeting, the Board elected Tapio Korpeinen as the chair and Seppo Parvi as the vice chair. Tiina Nyström, General Counsel, Executive Vice President, was elected as the secretary.

All of the Board members are independent of the company. The Board members do not own any shares of the company.

The procedure for the election and organisation of the Board is specified in detail in the corporate documents. The chair of the Board is named by the company's largest shareholder and the vice chair by the second largest shareholder. The President & CEO is not a member of the Board of Directors.

Duties of the Board of Directors

The Board is responsible for the oversight and control of the company and the appropriate arrangement of the company's administration and operations. Furthermore, the Board must ensure that the company's accounting and financial controls are properly arranged. The Board discusses and approves Pohjolan Voima's Code of Conduct, as well as corporate responsibility and risk management policies.

The Board is obligated to promote interests of the company and all shareholders. The Board members do not represent the parties that proposed them as Board members.

The Board of Directors' Charter defines its main duties and operating principles in more detail.

In order to perform its duties, the Board does the following, for example:

- Appoints the President and CEO, supervises the executive management
- Decides on the Group's strategy
- Decides on the Group's financing
- Decides on the Group's budget and action plan
- Decides on remuneration system principles and approves the employment contract and other benefits of the President and CEO, unless it has authorised the Chairman of the Board or the Remuneration and Nomination Committee to make these decisions
- Appoints committee members
- Appoints members of task forces and workgroup
- Approves policies and other guidelines which create the basis for the management system and internal control, as well as set limits and guide and monitor operations of the subsidiaries
- Approves the charters of committees and workgroups
- Supervises the Group's risk management
- Compiles the Report of the Board of Directors and approves the financial statements
- Approves interim reports
- Supervises the operations of the subsidiaries
- Approves the charge for the fixed costs for each series of shares and other basis for share-holder invoicing
- Summons the general meeting
- Approves investments, acquisitions and property transactions in accordance with the corporate documents, unless the President and CEO has been authorised to make these decisions
- Resolves upon the taking of credits and the giving of guarantees or other securities

The Board compiles an annual assessment of its own performance.

The Annual General Meeting makes decisions on the remuneration of Board and Committee members, as well as on their basis. In 2019, the remuneration paid to ordinary and deputy Board members totalled EUR 462,000.

The Board of Directors convened 14 times in 2019. On average, 99 percent of the members were present at the meetings.

Committees of the Board of Directors

To ensure that the issues within the responsibility of the Board of Directors are handled as efficiently as possible, the Board has appointed an Audit and Finance Committee and a Remuneration and Nomination Committee, each assisting and reporting to the Board of Directors and consisting of at least three members of the Board. The Board of Directors chooses the members of the Committees annually from among its members, appoints the chairs of the committees and approves their charters.

Remuneration and Nomination Committee

The Remuneration and Nomination Committee deals with matters concerning nomination and remuneration in general, the remuneration systems for the Corporate Executive Team and employees, and the committee may deal with proposals to be submitted to the Annual General Meeting regarding the nomination and remuneration of the members of the Board.

After the 2019 annual general meeting, the Board nominated Tapio Korpeinen as the chair of the Remuneration and Nomination Committee and Seppo Parvi and Anders Renvall as the other members of the committee. The Remuneration and Nomination Committee convened five times in 2019. The attendance rate at the meetings was 100 percent.

Audit and Finance Committee

The Audit and Finance Committee provides assistance to the in monitoring and evaluating the finance, financial reporting, control, and audit.

In addition, the committee prepares a recommendation for the election of the auditor and monitors the independence of the auditor.

After the 2019 annual general meeting, the Board nominated Toni Sederholm as the chair of the Audit and Financing Committee and Rami Vuola and Jukka Hakkila as the other members of the committee. From 1 January to 21 March 2019, Tapani Sointu acted as the chair of the Audit and Financing Committee, and Rami Vuola and Jukka Hakkila as the other members of the committee.

The committee convened thirteen times in 2019. The attendance percentage at the meetings was 95 percent.

In addition to the Committees of the Board of Directors, the Board can name task forces or workgroups to assist the Board and senior management. The Board confirms the duties and operating principles of task forces and workgroups.

4 President and CEO

The Board nominates the President and CEO. According to the Limited Liability Companies Act, the CEO is responsible for the day-to-day management in accordance with the instructions and regulations issued by the Board of Directors. The CEO is responsible for ensuring that the company's accounting is in compliance with the law and that the financial management is organised in a reliable manner. The CEO gives the Board and its members sufficient information for the performance of the Board's duties and implements the Board's decisions.

Pohjolan Voima Oyj's current President and CEO is Ilkka Tykkyläinen.

5 Corporate Executive Team

The Corporate Executive Team assists the President and CEO in operational management. Members of the Corporate Executive Team report directly to the President and CEO. In 2019, the [Corporate Executive Team](#) consisted of the President and CEO, Minna Laakso, Petri Hurri, Riitta Larnimaa, Tiina Nyström and Pertti Pietinen.

6 Remuneration

The Remuneration and Nomination Committee approves the company's remuneration systems. Incentive bonuses of the Corporate Executive Team are based on a long-term remuneration system and the criteria determined in it. The incentive scheme does not include shares or any derivatives.

The members of the Board of Directors, the President and CEO or other members of the company's management do not own the company's shares.

7 Related party administration

Pohjolan Voima maintains a list of related parties. The purpose of the list is to help identify transactions with a party that is considered a related party of Pohjolan Voima Oyj. The company monitors annually the related parties and assesses possible changes to its related parties. The company's related party acquisition process ensures that relevant information is included in the financial statements.

In spring 2019 the company conducted a separate inquiry to the management of their related party companies. The Board of Directors always decides on the possible transactions with the management of Pohjolan Voima Oyj and its related parties.

8 Internal control

The Board of Directors and the management are responsible for the company's internal control system. The purpose of internal control and risk management is to ensure the efficiency and effectivity of the operations, the reliability of information, as well as compliance with the regulations and operating principles. Pohjolan Voima's governance and internal control system are based on the Articles of Association, Shareholders' Agreement as well as the Code of Conduct and other company policies, approved by the Board of Directors.

9 Financial control and reporting

The objective of internal control related to the financial reporting process is to ensure that the management has reliable, up-to-date information to help in decision-making and that the financial statements and interim reports are prepared in compliance with laws and regulations.

Pohjolan Voima Oyj complies with the International Financial Reporting Standards (IFRS) that have been approved for the EU and the requirements set for companies that have listed a bond to public trading.

In accordance with its approved charter, the Audit and Finance Committee is responsible for assisting the Board of Directors in monitoring the financial status of the company, the Group and its parts, in monitoring and evaluating the financial reporting system, accounting and financial management, the efficiency of internal control and risk management system, in monitoring the internal audit and the financial audit process, and the implementation of changes in accounting practices.

Group Finance is responsible for reporting interim reports and statutory financial statements for Pohjolan Voima Oyj and its Group companies, as well as monthly reports, profit estimates and analyses. Named business controllers review the companies' financial status and prepare monthly internal company-level reports. The companies' financial reporting is regularly monitored by the Boards of the companies.

In general, shared systems are used for reporting. A service provider handles the financial administration, accounting and ledger processes in compliance with described subprocesses, agreed principles, agreed roles and responsibilities and defined controls. Development of the financial reporting processes and control systems is a continuous activity.

The separate financial statements of the parent company and other Group companies follow Finnish accounting practice. Adjustments to the income statements and balance sheets reported by individual Group companies are made in Group accounting in order to comply with the accounting policies of the Group (IFRS). Consistency is ensured by reconciliation. A quarterly report on the parent company's financial development is submitted to the Board of Directors. The consolidated IFRS financial statements are reported to the Board twice a year.

The decision-making order for expenses, investments and financial commitments is determined in the corporate documents, and approval rights are determined in stages for the different organisational levels in the policy approved by the Board. Most significant decisions are submitted separately to the Board of the individual Group company and to the Board of the parent company for approval.

10 Risk management

Risk management is a continuous process of analysing and managing threats and opportunities faced by the company in its efforts to achieve its goals, and to ensure the continuity of the business. The key principles of risk management are defined in the Pohjolan Voima Group Risk Management policy. Subsidiaries and Group functions are responsible for their own risk management and associated reporting. The management reporting on the comprehensive risk circumstances to the Board is linked to the strategy and long-term planning process. The Board of Directors oversees the reporting on risk exposures, risk management activities and results related to the company's strategy and operations.

11 Internal audit

The operating principles of Pohjolan Voima internal audit have been defined in the audit charter approved by the Board of Directors. Internal audit assists the company in achieving its objectives by providing a systematic approach to evaluate and improve governance processes, risk management and internal control. In addition, internal audit manages the reporting procedure for suspected misconduct according to a specified procedure. Internal audit reports functionally under the Audit and Finance Committee and reports summaries of its plans and findings to the Pohjolan Voima's Board of Directors.

12 Insider administration

Pohjolan Voima Oyj follows the EU's Market Abuse Regulation, Finland's Securities Market Act, the guidelines and regulations of authorities and the Guidelines for Insiders of Listed Companies issued by Nasdaq Helsinki Ltd. The Board of Directors has approved of a policy that sets responsible persons for the actions of insider administration and the guidelines for the insider administration, and for persons involved in insider projects as well as management and their closely associated persons.

As an issuer of bonds, Pohjolan Voima Oyj, in accordance with the Market Abuse Regulation, maintains project specific insider lists on persons who work for the company on the basis of an employment contract or other contract and, either regularly or irregularly, receive insider information directly or indirectly related to the issuer. Rules for the processing of insider information have been prepared and Group General Council is responsible for maintaining and updating them. Creating and maintaining the insider lists is the responsibility of the Company's legal affairs department. Group General Council nominates the person responsible for managing the insider lists and his/her substitute.

13 Disclosure policy for investors

The Board of Directors of the parent company has adopted a Disclosure Policy for Investors. Pohjolan Voima has a duty to disclose information on a regular and continuous basis. The company's communication objective is to provide, without undue delay, correct and relevant information to the investors and other market players on the company's operations, operating environment, strategy, goals, and financial situation. Stock exchange releases issued by Pohjolan Voima Oyj are approved by the company's President and CEO, the Chairman of the Board or persons authorised by them.

14 Auditing and auditor

The principal task of statutory audit is to verify that the financial statements give true and fair view on the Group's results and financial position. The Audit and Finance Committee prepares the election process of the auditors and gives its recommendation to the Board of Directors. The Board makes a proposal of the election of the auditor to the shareholders in the Annual General Meeting. The Annual General Meeting annually appoints one auditor. The auditor must be an audit firm approved by the Finnish Chambers of Commerce.

In 2019, the annual general meeting elected PricewaterhouseCoopers Oy, authorised public accountants, as the Company's auditor, with Jouko Malinen, Authorised Public Accountant, acting as a principal auditor.

In 2019, the auditor (PwC) received EUR 189,000 as auditing fees, as well as EUR 19,000 for other services.

Financial statements 2019

Key figures (IFRS) of Pohjolan Voima Group 2019

IFRS	2019	2018*	2017*	2016*	2015*
Turnover, € million	422	515	455	512	573
Operating result, € million	48	-5	10	-4	-3
Net interest-bearing liabilities € million	738	753	788	881	873
As percentage of turnover, %	175	146	173	172	152
Equity ratio, %	39	39	40	40	42
Total assets, € million	2106	2103	2089	2166	2296
Investments, € million	4	5	7	11	18
Average number of personnel	89	106	119	149	199

*Includes continuing and discontinued operations.

The Report of the Board of Directors and the Financial Statements

Read more on the 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](#).

The annual report including the Report of the Board of Directors and the Financial Statements are translations from the Finnish original.

▶ Report of the Board of Directors

Financial Statements 2019

- ▶ 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 2019

Operating environment

In 2019, electricity consumption in Finland was 86.1 TWh (87.4 TWh in 2018). Of this volume, 66.1 (67.5) TWh was produced in Finland, while net imports into Finland amounted to 20.0 (19.9) TWh. Imported electricity covered 23.3% (22.8%) of Finnish electricity consumption. Most of the imported electricity came from Sweden. In 2019, electricity consumption in Finland decreased by 2% year-on-year. Industrial power consumption decreased by 4% and the power consumption of other sectors remained at the same level as in the previous year.

Nord Pool Spot trade amounted to 494 (524) TWh. The annual average system price was €38.94 (43.99) per MWh, while the annual average of the Finnish area price was €44.04 (46.80) per MWh. The decrease in the price of electricity compared with the previous year was due to the higher water levels in the Nordic countries, lower fuel prices and the decreased consumption of electricity.

The price of the EUA emission allowance experienced strong fluctuation in 2019. At the beginning of the year, the market price was approximately €25 per tonne, and it ended up at the same level at the end of the year.

Both the European Parliament elections and the Finnish parliamentary elections took place in 2019. The programme negotiated by the Government of Prime Minister Rinne remained unchanged even though Rinne was forced to resign and was preplaced as the Prime Minister by Sanna Marin. The Government's programme will guide the national policies for the next few years. The Government aims to make Finland carbon neutral by 2035 and carbon negative shortly thereafter. The Government's attitude towards new licences for the currently operating nuclear power plants is positive. The amount of peat used as a source of energy will be cut at least by half by 2030. An act that prohibits the use of coal in energy production has already entered into force.

According to the Government Programme, the Government will amend the Water Act in a manner that will include "zero obligation" plants in the scope of fisheries obligations. The Government will introduce a national programme to revive migratory fish stocks. Based on the national fishway strategy, the programme will continue the restoration of the natural cycle in constructed waterways and implement migratory fish projects through extensive cooperation.

The Government Programme includes several tax policies that will affect the energy industry. The Government will implement a reform of energy taxation by the 2020 budget session. Focus of the energy subsidy system will be moved from production subsidies to demonstration subsidies for new energy technology investments. The Government will reduce the tax subsidy of combined heat and power production and increase the tax rate of heating fuels. Real estate tax will be renewed to better reflect the current market values of properties.

An EU directive to combat aggressive international tax planning has, for the most part, been executed. In accordance with the Government Programme and the Parliament's statement, the Ministry of Finance is still investigating the possibility to completely exempt nuclear power produced using the Mankala principle from interest expense deduction limitations.

During its Presidency of the EU, Finland promoted tighter climate targets for the EU. The heads of the EU member states decided that the EU's target will be to reach carbon neutrality by 2050, even though Poland announced that it will not be able to reach the target without EU's support funding. The matter will be discussed further in the summer of 2020.

The new European Parliament started its work in the summer of 2019, and the new Commission headed by Ursula von der Leyen in November 2019. In December 2019, the Commission published its Green Deal package, which promotes the green economy and indicates that the Commission will propose approximately 50 related legislative projects during its term. The core of the programme includes more ambitious climate targets and stricter measures that guide towards the new targets. Further promoting sustainable financing is also a part of the package.

In December 2019, the Commission published its evaluation of the fitness of the Water Framework Directive. The Commission finds the Water Framework Directive to be a well-functioning system as such, but sees it necessary to enforce its execution more strictly.

According to an annual survey of the attitude of Finnish citizens towards energy, conducted by Finnish Energy, people are more accepting of nuclear power than ever before.

Pohjolan Voima's heat and power production

In 2019, Pohjolan Voima's total electricity supply was 12.1 (12.5) TWh. The Group's own electricity production accounted for 11.7 (12.0) TWh, of which the parent company's supplies to its shareholders were 11.2 (11.6) TWh. The subsidiaries supplied 0.5 (0.4) TWh to their other shareholders. Purchases from the Nordic electricity markets were 0.4 (0.5) TWh, and sales amounted to 0.4 (0.3) TWh. Heat deliveries were 4.2 (4.4) TWh.

Nuclear power made up 69.2% (63.8%) of the electricity supply. Teollisuuden Voima's Olkiluoto nuclear power plant generated 14.8 (14.1) TWh of electricity, of which Pohjolan Voima obtained 8.4 (8.0) TWh in accordance with its shareholding. The combined load factor of the Olkiluoto plant units was 94.8% (91.1%).

Hydropower accounted for 1.6 (1.5) TWh, or 13.5% (12.2%) of the electricity supply. The production of hydropower increased slightly from the previous year and was close to the production volume of a normal year in terms of water conditions.

A total of 1.7 (2.1) TWh of electricity was generated in combined heat and power (CHP) plants. Its share of the total supply was 13.8% (16.5%). After the sale of the production share of the Meri-Pori plant at the beginning of 2019, Pohjolan Voima no longer has any condensing power production in operation.

Electricity supply (GWh)	2015	2016	2017	2018	2019
Nuclear power	8,086	8,136	7,602	7,987	8,366
Hydropower	2,297	1,983	1,794	1,524	1,631
CHP	2,533	2,313	1,919	2,065	1,669
Condensing power	388	396	82	409	0
Purchases	790	545	533	543	423
Total	14,094	13,373	11,930	12,528	12,089

Key events in 2019

On 8 June 2018, Pohjolan Voima Oyj concluded a sale of assets with Power-Deriva Oy where Pohjolan Voima's energy management operations in Harjavalta were transferred to PD Power Oy. The sale of assets took effect on 1 January 2019.

On 7 March 2019, Teollisuuden Voima Oyj (TVO) announced that it had received an operating license for its OLS nuclear power plant unit from the Government.

On 15 March 2019, Pohjolan Voima Oyj paid its C series shareholders a total of EUR 14 million as refund of restricted equity (share capital and premium fund) through the reserve for invested non-restricted equity.

On 4 April 2019, Pohjolan Voima Oyj signed a deal with EPV Energy Ltd on a sale of assets regarding Vaskiluodon Voima Oy's business. The deal will take effect on 1 January 2023.

PVO-Lämpövoima Oy's coal-fired condensing power plants in Tahkoluoto and Kristiinankaupunki have been under long-term storage since 2015, at which time the decision was made to cease their production operation. PVO-Lämpövoima has been reported as a discontinued operation in the consolidated financial statements. During the financial year, demolition of the buildings and equipment was started in the Tahkoluoto power plant area.

An unsecured bond of €125 million issued by Pohjolan Voima Oyj in June 2018 was listed, according to the loan terms, on Nasdaq Helsinki in May 2019.

Pohjolan Voima Oyj announced changes to the project schedule of TVO's OL3 EPR plant unit on 19 June 2019, 17 July 2019 and 8 November 2019. The latest update to the project schedule was received on 19 December 2019, at which time Pohjolan Voima Oyj announced that TVO had received an updated project schedule on the commissioning of the OL3 EPR plant unit from the plant supplier, Areva-Siemens consortium. According to the schedule, nuclear fuel will be loaded in the reactor in June 2020, the plant unit will be connected to the national grid for the first time in November 2020 and regular electricity production will start in March 2021.

On 18 November 2019, Pohjolan Voima Oyj issued an unsecured bond of €150 million. The bond will mature on 20 January 2025, and a fixed annual interest of 1.25 percent will be paid on it. The bond was listed on the Nasdaq Helsinki stock exchange list.

Posiva Oy, which is responsible for the final disposal of spent nuclear fuel from its owners TVO and Fortum, decided to construct a production facility for the handling of spent nuclear fuel, consisting of an encapsulation plant and a final disposal facility. Cornerstone for the encapsulation plant was laid in September 2019.

Result from operations and financing

Pohjolan Voima operates on a cost price principle. The 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, key financial indicators are not relevant when reviewing the company's business performance or financial status.

The targets and risks of Pohjolan Voima's financing operations have been defined in a 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. The management of financial risks has been discussed in Note 3 (Management of financial risks) to the consolidated financial statements.

The Group's liquidity is good. On 31 December 2019, cash and cash equivalents totalled €62 (60) million, and the Group had €300 (300) million of unused binding credit facility agreements and €90 (90) million of unused shareholder loan commitments. Of the credit facility agreements, €21 million will mature in June 2021 and €279 million in June 2022. For short-term funding, the Group had a domestic commercial paper programme of €300 (300) million, of which €100 (85) million was used.

The Group's interest-bearing liabilities amounted to €1,210 (1,222) million. On 18 November 2019, Pohjolan Voima Oyj issued an unsecured bond of €150 million. The bond will mature on 20 January 2025, and a fixed annual interest of 1.25 percent will be paid on it. The bond was listed on the Nasdaq Helsinki stock exchange list. There were no liabilities involving an exchange rate risk, and the Group's loan agreements do not include any financial covenants.

At the end of the year, the Group's equity ratio was 39.5% (38.8%). The consolidated turnover from continuing operations was €417.1 (514.1) million. The operations of PVO-Lämpövoima Oy, the plants of which were closed down in 2015, have been reported in the Group's financial statements as discontinued operations. The Group's consolidated result for the financial period was €32.9 (–29.7) million. The result of the financial period was mostly impacted by the positive result of the joint venture TVO. TVO updated the cost estimate based on the new technical plan and schedule for nuclear waste management, which resulted in a change to the nuclear waste management liability provision and TVO also changed the discount rate of interest for the nuclear waste management liability calculation.

Investments

Total investments of the Pohjolan Voima Group, excluding financial investments and the purchase of emission allowances, amounted to €4.4 (5.4) million.

At PVO-Vesivoima Oy, an electrical and automation modernisation project at the Raasakka power plant was completed, and repairs on a dam at the Melo power plant continued throughout the year. PVO-Vesivoima's investments totalled €2.1 million. At Laanilan Voima Oy, investments were made, among other things, in a renovation of a coal bridge and the replacement of the Pyroflow boiler's boiling surfaces and masonry. Laanilan Voima's investments totalled €1.5 million. The Group's remaining investments were made in replacements and renovations.

Between 2004 and 2019, Pohjolan Voima Oyj has invested a total of €841.1 (841.1) million in the new OL3 nuclear power plant project that is currently under construction. The investments are based on the financing plan for the OL3 EPR project, according to which the equity required for the investment is accumulated along with the progress of the project.

Research and development

Research and development expenditure during the financial year totalled €0.1 million (0.1 in 2018 and 0 in 2017).

Personnel

The average number of employees working for the Group was 89 (106 in 2018 and 119 in 2017), including discontinued operations. The number of personnel has decreased due to a sale of assets and a reduction in condensing power production. The Group's salaries and fees for the financial period, including discontinued operations, totalled €7.6 million (€9.1 million in 2018 and €10.2 million in 2017). The average age of permanent employees was 45 (45) years.

The average number of employees working for the parent company was 35 (50 in 2018 and 57 in 2017). Salaries and fees for the financial period totalled €4.0 million (€5.2 million in 2018 and €5.7 million in 2017).

Environment

Environmental management systems certified in accordance with ISO 14001 are in use in the majority of Pohjolan Voima's production companies. This helps to ensure the achievement of environmental objectives and continuous improvement of operations. In addition, all of our production companies use the energy efficiency system ETJ+ or the energy management system ISO 50001. Some of these systems are certified. In addition, our production companies are participating in energy efficiency agreements during the period 2017–2025. Furthermore, the environmental management system of TVO (a joint venture of Pohjolan Voima) is EMAS registered.

A leak detected in the retaining earth dam of the Melo power plant in 2016 was further repaired by grouting in 2019. The grouting repair is expected to be completed during 2020. The repair work has not affected the environment or the 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 2.2 (2.5) million fry during the reporting period. Nearly all stocking plans were fulfilled.

On 8 January 2019, PVO-Vesivoima signed the Iijoki River Agreement with municipalities of the Iijoki region, Metsähallitus, the Centre for Economic Development, Transport and the Environment for North Ostrobothnia, and peat producers. With the agreement, the parties agreed on the implementation of the Iijoki River Vision and Action Plan for 2019–2023, as well as on establishing the Iijoki River Advisory Board and Management Team.

PVO-Vesivoima is participating in Finland's largest, three-year migratory fish spearhead project in 2017–2020. The budget of the project is more than €4 million, and the Finnish Government is committed to providing €2 million of funding for the project as part of its Luontopolitiikkaa luottamuksella ja reiluin keinoin ("Nature policy based on trust and fairness") spearhead project.

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 planned fishways at Raasakka. The application was supplemented in November 2019 with new plans.

In March 2017, 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 the Kemijoki river. In October 2017, the centre filed a similar application concerning the Iijoki river. In addition to entirely new requirements, this involves additions to the current obligations. The Regional State Administrative Agency did not announce the applications during 2019.

All the thermal power plants operated by the Group fall within the sphere of the Emissions Trading Act. Carbon dioxide emissions from the production of electricity and heat amounted to 0.9 (1.6) million tonnes. The notes to the financial statements only report CO₂ emissions of the subsidiaries, which amounted to 0.5 (0.6) 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 also decreased from the previous year. Sulphur dioxide emissions amounted to 0.7 (1.4) thousand tonnes, nitrogen oxide emissions to 1.9 (2.6) thousand tonnes and particle emissions to 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 planning period is from 1 January 2016 to 30 June 2020.

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 the main field of activity of which is energy production will be allowed four years to adjust their operations to the conclusions. The first power plants prepared their applications for the review of their environmental permits in 2018, and the licensing work continued in 2019. The emission limits will be stricter in the new environmental permits.

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 realisation of the strategy and achievement of business goals, as well as safeguard 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. Risks that may compromise the achievement of the objectives are estimated, and measures for their management are defined. The significance of the risks is estimated as the sum of their likelihood of occurrence and impact.

Group-level risks and their significance are presented in a risk matrix in terms of consequences and likelihood. Group-level risks are reported to the parent company's Executive Group and Board of Directors in accordance with the annual management calendar.

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

All Pohjolan Voima companies are covered for risks of damage through measures related to maintenance, occupational health and 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 uncertainties

The Group's most significant risks are related to the schedule and profit-yielding capacity of the OL3 EPR project of the joint venture TVO. The original plan was to begin the commercial electricity production of the plant unit in late April 2009, but completion of the plant unit has been delayed. According to the schedule last updated by the plant supplier in December 2019, regular electricity production of the plant unit will begin in March 2021. A risk related to the planned completion refers to a situation where commercial operations cannot be started as planned, which will give rise to additional expenses.

TVO has implemented several risk management actions related to the OL3 EPR project in 2019 to promote TVO's readiness for the commissioning of the plant unit and the operation of three nuclear power plant units. TVO monitors closely the compliance of the conditions set in the settlement agreement in March 2018 and that the commissioning of the OL3 EPR plant unit is executed according to the plant supplier's schedule and that financial and technical resources are secured.

If the OL3 EPR project does not reach its projected output level, load factor or operating cost structure, or if the Finnish national grid limits the output level, there is a risk that the production costs will increase in comparison to the objective. This risk has been analysed with the help of various scenarios affecting the profit-yielding capacity of OL3.

As risk management actions, TVO as the licensee ensures, among other things, that the OL3 EPR plant unit has undergone extensive functional testing before nuclear test operations are launched. TVO will ensure that experience gained from the Taishan sister plant is utilised in the nuclear commissioning of the OL3 EPR plant unit.

Share capital and share issues

On 31 December 2019, Pohjolan Voima's share capital was €55.3 (65.3) million and the total number of shares was 32,509,113 (32,509,113).

No share issues were carried out during the financial year.

Table: Pohjolan Voima Oyj's shareholders

Shareholder	Shareholding, %, 31 December 2019	Shareholding, %, 31 December 2018
EPV Energy Ltd	5.489	5.489
Etelä-Suomen Voima Oy	1.517	1.482
Helen Ltd	0.619	0.619
Ilmarinen Mutual Pension Insurance Company	1.831	1.831
Kemira Oyj (incl. Neliapila pension fund)	5.060	5.060
Kokkolan Energia Oy	1.845	1.845
Kymppivoima Oy	5.907	5.907
Metsä Group (Metsäliitto Cooperative, Metsä Fibre, Metsä Board Oyj)	3.657	3.657
Myllykoski Oyj*	0.631	0.631
Oulun Energia Ltd	0.906	0.906
Outokumpu Oyj	0.096	0.096
Perhonjoki Ltd	2.167	2.167
Town of Pori	1.366	1.401
Rautaruukki Corporation	0.090	0.090
Stora Enso Oyj	15.608	15.608
UPM Energy Oy*	47.686	47.686
UPM Communication Papers Ltd*)	3.457	3.457
Vantaa Energy Ltd	0.229	0.229
Yara Suomi Oy (incl. pension fund)	1.840	1.840

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

Management

The annual general meeting held on 21 March 2019 adopted the 2018 financial statements, adopted the profit and loss statement and the balance sheet, and discharged the members of the Board of Directors and the President and CEO from liability.

The following ordinary members to the Board of Directors were elected: Tapio Korpeinen, Executive Vice President (UPM-Kymmene Corporation); Seppo Parvi, Chief Financial Officer (Stora Enso Oyj); Jukka Hakkila, Group General Counsel (Kemira Oyj); Anders Renvall, Managing Director (Kymppivoima Oy); Tomi Sederholm, Director, Finance & Control and Strategy (UPM Energy Ltd); Esa Kaikkonen, CEO (Metsä Group/Metsä Tissue); Rami Vuola, President & CEO (EPV Energy Ltd); Mikko Rintamäki, Managing Director (Kokkolan Energia Oy); and Mikael Surakka, Manager - Energy (Outokumpu Oyj).

At its inaugural meeting, the Board of Directors elected Tapio Korpeinen as the chair and Seppo Parvi as the vice chair. The Board also elected committee members from among its members. The Board of Directors convened 14 (18) times in 2019. The company's President and CEO was Ilkka Tykkyläinen, M.Sc. (Eng.), eMBA.

Major legal actions pending

No major legal actions were pending during the reporting period.

Events after the end of the financial period

The Regional State Administrative Agency for Northern Finland announced on 25 February 2020 a change application by the Centre for Economic Development, Transport and the Environment for Lapland to amend the stocking and fish stock management obligations of the Iijoki river hydropower plants. PVO-Vesivoima intends to lodge its objection to the change application documents by 17 April 2020, during the period in which the public notice is displayed for viewing.

Outlook

During the current financial period, power and heat production is expected to continue as in the preceding year.

TVO will continue the realization of the OL3 EPR nuclear power plant project and preparing the plant unit for production. Collaboration to complete the OL3 EPR project will continue with the plant supplier in compliance with the plant supplier's ramp-up programme. The goal is to be able to implement the fuel loading in compliance with the plant supplier's schedule in June 2020 and to connect the plant unit to the national grid for the first time in November 2020. According to the commissioning programme, the plant unit is expected to produce 1–3 TWh of electricity with varying power levels during the test program that starts when the unit is connected to the grid and ends when regular electricity production is commenced.

Posiva Oy will continue the construction stage of the final disposal project (the EKA project) in 2020.

Proposal of the Board of Directors regarding the distribution of profit

On 31 December 2019, the parent company's distributable funds totalled €320,733,695.50, of which net profit for the financial period amounted to €–6,687,528.00. 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 dividend be distributed.

Consolidated statement of comprehensive income

1 000 €	Note	1.1. - 31.12.2019	1.1. - 31.12.2018
Continuing operations			
Sales	7	417 091	514 096
Other operating income	8	2 527	2 968
Materials and services	9	-319 819	-402 536
Personnel expenses	10	-8 502	-9 959
Depreciation, amortisation and impairment	11	-39 894	-39 048
Other operating expenses	12,13	-50 422	-53 437
Share of (loss)/profit of associates and joint ventures	14	43 723	-19 535
Operating profit or loss		44 704	-7 451
Finance income	15	3 249	2 728
Finance costs	15	-17 976	-27 637
Finance costs - net		-14 727	-24 909
Profit before income tax		29 977	-32 360
Income tax expense	16	-2	0
Profit for the year from continuing operations		29 975	-32 360
Discontinued operations			
Profit/loss from discontinued operations		2 927	2 611
Profit for the year		32 902	-29 749
Other comprehensive income:			
Items, that may be reclassified later to profit or loss			
Share of other comprehensive income of associates			
Cash flow hedging	20	-4 581	4 166
Other comprehensive income for the year		-4 581	4 166
Total comprehensive income for the year		28 321	-25 583
Profit attributable to:			
Owners of the parent		32 731	-29 098
Non-controlling interest		171	-651
		32 902	-29 749
Total comprehensive income attributable to:			
Owners of the parent		28 150	-24 932
Non-controlling interest		171	-651
		28 321	-25 583

Consolidated balance sheet

1 000 €	Note	31.12.2019	31.12.2018
ASSETS			
Non-current assets			
Intangible assets	17	285 659	284 173
Property, plant and equipment	18,19	473 274	497 440
Investments in associated companies and joint ventures	20	753 768	714 625
Other financial assets	21	484	486
Loans and other receivables	22	445 987	446 034
Non-current assets total		1 959 172	1 942 758
Current assets			
Inventories	24	9 131	12 038
Trade and other receivables	22	72 966	84 399
Cash and cash equivalents	23	62 367	59 598
Current assets total		144 464	156 035
Assets held for sale	25	2 768	4 653
Total assets		2 106 404	2 103 446
Equity			
Equity attributable to owners of the parent	26		
Share capital		55 321	65 293
Share premium		205 999	216 822
Reserve for invested non-restricted equity		327 644	326 683
Revaluation reserve		-2 881	1 700
Retained earnings		204 444	165 879
Total		790 527	776 377
Non-controlling interests		40 686	40 515
Total equity		831 213	816 892
LIABILITIES			
Non-current liabilities			
Provisions	27	5 020	3 345
Borrowings	28	981 865	1 107 672
Other non-current liabilities	28,30	10 154	6 293
Non-current liabilities total		997 039	1 117 310
Current liabilities			
Borrowings	28	228 307	114 533
Trade and other payables	29	49 845	54 711
Current liabilities total		278 152	169 244
Liabilities related to assets held for sale	25	0	0
Total liabilities		1 275 191	1 286 554
Total equity and liabilities		2 106 404	2 103 446

CONSOLIDATED STATEMENT OF CASH FLOWS

1 000 €	Note	2019	2018
Cash flows from operating activities			
Profit for the year		32 902	-29 749
Adjustments to the profit for the year	6	8 939	81 388
Change in net working capital	6	8 348	-7 063
Interest paid and other financial expenses		-13 904	-12 654
Interest received		3 128	2 667
Income tax paid		-2	-10
Net cash generated from operating activities		39 411	34 579
Cash flows from investing activities			
Proceeds from sales of shares in participating interests	20	0	2
Purchases of intangible assets and property, plant and equipment (PPE)	17,18	-4 158	-5 538
Proceeds from sales of intangible assets and PPE	17,18	2 203	2 315
Proceeds from sales of other financial assets	17,18	0	132
Equity refunds received		0	3 310
Loans granted	21,28	0	-60 232
Dividends received		0	18
Net cash used in investing activities		-1 955	-59 993
Cash flows from financing activities			
Equity refunds paid	25,26	-14 000	0
Proceeds from borrowings	25,28	149 424	125 000
Repayments of borrowings	25,28	-161 226	-44 854
Principal elements of lease payments (2018 Principal elements of finance lease payments)	25,28	-12 728	-13 791
Proceeds (+) or repayments (-) of current liabilities	25,28	3 843	-24 889
Dividends paid		0	-311
Net cash used in financing activities		-34 687	41 155
Net (decrease)/increase in cash and cash equivalents		2 769	15 741
Cash and cash equivalents at the beginning of year		59 598	43 857
Change in cash and cash equivalents		2 769	15 741
Cash and cash equivalents at the end of year	23	62 367	59 598

Cash flow from discontinued operations is disclosed in note 25.

Consolidated statement of changes in equity

1 000 €	Note	Share capital	Share premium	Fair value reserve	Reserve for invested non-restricted equity	Retained earnings	Equity attributable to owners of the parent	Equity attributable to non-controlling interest	Total equity
Balance at 1.1.2018		65 293	216 822	-2 466	328 869	192 792	801 310	42 197	843 507
Comprehensive income									
Profit or loss						-29 098	-29 098	-651	-29 749
Other comprehensive income:									
Cash flow hedges				4 166			4 166		4 166
Total comprehensive income for the year		0	0	4 166	0	-29 098	-24 932	-651	-25 583
Transactions with owners									
Transfer to retained earnings	26				-2 186	2 186	0		0
Non-controlling interest of a liquidated group company							0	-720	-720
Transactions with owners total		0	0	0	-2 186	2 186	0	-720	-720
Dividends to non-controlling interest							0	-311	-311
Balance at 31.12.2018		65 293	216 822	1 700	326 683	165 879	776 377	40 515	816 892
Balance at 1.1.2019		65 293	216 822	1 700	326 683	165 879	776 377	40 515	816 892
Comprehensive income									
Profit or loss						32 731	32 731	171	32 902
Other comprehensive income:									
Cash flow hedges				-4 581			-4 581		-4 581
Total comprehensive income for the year		0	0	-4 581	0	32 731	28 150	171	28 321
Transactions with owners									
Transfer to retained earnings and reserve for invested non-restricted equity	26	-9 972	-10 823		14 961	5 834	0		0
Refund of reserves	26				-14 000		-14 000		-14 000
Transactions with owners total		-9 972	-10 823	0	961	5 834	-14 000	0	-14 000
Balance at 31.12.2019		55 321	205 999	-2 881	327 644	204 444	790 527	40 686	831 213

Notes to the consolidated financial statements

[1 Summary of significant accounting policies](#)

[2 Critical judgements in applying the entity's accounting policies and critical estimations and assumptions](#)

[3 Financial risk management](#)

[4 Segment information](#)

[5 Sold non-current assets and business combinations](#)

[6 Notes to the statement of cash flows](#)

[7 Sales](#)

[8 Other operating income](#)

[9 Materials and services](#)

[10 Personnel expenses](#)

[11 Depreciation, amortisation and impairment](#)

[12 Other operating expenses](#)

[13 Research and development](#)

[14 Share of \(loss\)/profit of associates and joint ventures](#)

[15 Financial income and expenses](#)

[16 Income tax](#)

[17 Intangible assets](#)

[18 Property, plant and equipment](#)

[19 Leases](#)

[20 Investments in associates and joint ventures](#)

[21 Other financial assets](#)

[22 Loans and other receivables](#)

[23 Short-term deposits, cash and cash equivalents](#)

[24 Inventories](#)

[25 Discontinued operations and assets held for sale](#)

[26 Equity](#)

[27 Provisions](#)

[28 Borrowings](#)

[29 Trade payables and other current liabilities](#)

[30 Derivative financial instruments](#)

[31 Financial assets and liabilities by category and fair value hierarchy](#)

[32 Contingent liabilities and assets and purchase commitments](#)

[33 Operating leases](#)

[34 Emission allowances](#)

[35 Group companies](#)

[36 Related-party transactions](#)

[37 Breakdown of share ownership and shareholder information](#)

[38 Events after the reporting period](#)

Notes to the consolidated financial statements

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 27 February 2020, 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 Pohjola 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 2019 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. The consolidated financial statements are presented in euros.

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 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 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.

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 as well as losses carried forward.

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

The Group leases various offices, warehouses, retail stores, equipment and vehicles. Rental contracts are typically made for fixed periods of less than 12 months to 50 years. Until the 2018 financial year, leases of property, plant and equipment were classified as either finance leases or operating leases, see note 19. From 1 January 2019, leases are recognized as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Further, some agreements include asset retirement obligation which is recorded in property, plant and equipment as well as in provisions.

In 2019, subsequent to the IFRS 16 adoption, assets and liabilities for all leases are recorded in the balance sheet as right-of-use assets and the obligation for lease payments as liability. Lease liabilities are measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate, which is a rate the lessee would pay by borrowing the corresponding balance for equal period and with equal collaterals. Right-of-use assets are measured an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments. The Group allocates the consideration in the contract to each lease component and will separate non-lease components if these are identifiable. Right-of-use assets are initially measured at cost, which comprises the initial amount of the lease liability adjusted mainly for lease payments made at or before the commencement date. The right-of-use assets are subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the lease term or the end of the useful life of the right-of-use asset. Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Group's incremental borrowing rate. The lease term applied corresponds to the non-cancellable period except in case where the Group is reasonably certain to exercise renewal option of prolonging the contract. The lease liabilities are measured at amortized cost.

The Group has decided to use the exemption not to apply the new guidance to leases with a terms less than twelve months or to leases for which the underlying asset value is of low value. Asset retirement obligations included in the leasing agreements have been considered in the implementation.

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise IT equipment and small items of office furniture.

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 according to IFRS 9: assets measured at fair value through profit or loss, at fair value through other comprehensive income and at amortized cost. The classification is determined at initial recognition based on the objective of the Group's business model. The Group does not currently have any financial assets measured at fair value through other comprehensive income.

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.

Amortized cost

Amortized cost included non-current loan and other receivable as well as current trade and other receivables. Loans and receivables are subsequently carried at amortised cost using the effective interest method and included in current assets and non-current assets; in the latter for maturities greater than 12 months after the end of the reporting period. 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.

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

According to the impairment model, the impairment of financial assets must be determined using a model based on expected credit losses. From the Group's perspective, the new impairment model applies to trade receivables and the earlier recognition of their credit losses. The Group's credit position has not changed between the standards.

According to the IFRS 9 standard, the Group applies a simplified provision matrix to recognize the credit risks in trade receivables on the basis of which a deductible item is recognized for all trade receivables based on the expected credit losses over the entire period of validity. The Group's annual credit losses have been very minor and the expected credit losses according to the new model do not have a significant impact. Regarding financial instruments measured at amortized cost the Group performs active monitoring and recognizes impairment in profit or loss in accordance with the criteria.

The Group estimates on each closing date whether objective evidence exists of the impairment of an individual financial asset or a group thereof. If the fair value of the financial assets has fallen substantially below their acquisition cost on the closing date, this is considered as evidence of impairment of the financial assets. Evidence of impairment may include, for example, the counterparty's substantial financial difficulties, failure to pay interest or instalments, probability of bankruptcy or other financial reorganization, or observable information indicating determinable reduction of the estimated deferred cash flows, such as changes in the delay of payments and the counterparty's deteriorated financial situation correlating with the failure to pay.

The Group has shareholder loan receivables from Teollisuuden Voima Oyj, a joint venture of the Group. The management has assessed the impairment risk regarding the loans on the basis of the possible financial difficulties or outstanding interest payments from the counterparty and considered that such does not exist. On the basis of these findings the management considers that no impairment risk exists.

Financial liabilities

Financial liabilities are classified into the following categories in accordance with the IFRS 9 standard: liabilities measured at fair value through profit or loss, at fair value through other comprehensive income as at amortized cost.

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 of or all 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 of or all 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 as determined in IFRS 9. Group has not applied for hedge accounting in 2018 and 2017 and has recognized the gains and losses resulted from fair value measurement through income statement in finance income or cost.

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. Items covered by hedge accounting in accordance with the IFRS 9 standard include instruments used for hedging against the currency risk of uranium supply contracts of TVO (forwards exchange contracts, currency swaps) and some of the interest rate swaps used for hedging against the fluctuation of interest cash flows in the loan agreements of TVO. TVO shall document both at the beginning of and after the hedging its estimate of whether the derivative financial instruments used for hedging transactions are efficient. Derivative financial instruments included in hedge accounting are divided into non-current and current assets and liabilities based on the maturity of the hedged instrument. TVO applies both cash flow and fair value hedge accounting.

With the adoption of the IFRS 9-standard the assessment of hedge effectiveness is based on future orientation. The ineffectiveness of TVO's hedging relationship is expected to continue being very minor. IFRS 9 defines three hedge effectiveness requirements for the application of hedge accounting. The first requirement requires a financial connection between the hedged item and hedging instrument. It must be expectable that the changes in the value of the hedging instrument and hedged item are opposite due to the instrument or risk used as the shared basis. Secondly, the standard requires that changes in value due to the financial relationship are not dominated by the impact of credit risk. Thirdly, the hedging rate of the hedging relationship must equal the hedging rate resulting from the amount of the hedging instrument that the organization actually uses for hedging that amount of the hedged item. IFRS 9 requires the same hedging rate that is actually used in risk management. The changes have no significant impact for TVO.

Other companies in the Group have derivative instruments that do not fulfil the hedge accounting criteria according to IFRS. Examples of these instruments are interest rate swap agreements which have been used to exchange floating rate borrowings into fixed rate borrowings. 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 benefit 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 of or all 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 Finnish State Nuclear Waste Management Fund. The liability covers all the future expenditure for the handling of the existing nuclear waste, including the decommissioning of the nuclear power plants, the disposal of the spent fuel and a risk marginal.

The amount of payments is determined by assuming that the decommissioning would start at the beginning of the year following the assessment year. The research relating to the disposal, as well as the actual disposal of TVO's spent fuel, are carried out by Posiva Oy, which charges from TVO the costs arising from these activities including the acquisition cost of property, plant and equipment.

In the consolidated financial statements of TVO the share of the funds in the Finnish State Nuclear 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. The fair value of the nuclear waste management liability is calculated by discounting the cash flows based on the planned estimated future activity and the estimated expenditure relating to it taking into account actions already taken.

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 amount recognized relating to decommissioning of the plant is depreciated over the estimated useful life of the power plant.

The provisions for spent nuclear fuel covers the future disposal cost of fuel used by the end of each reporting period. The costs for the disposal of the spent nuclear fuel is recognised during the operating time of the plant based on fuel usage. The impact of any changes to the plan will be recognized immediately in the income statement based on fuel used by the end of reporting period.

The timing factor 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 Oy are not traded in a public market.

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

The Group applies segment reporting in the 2018 financial statements. The Group has four reportable segments: hydro power, thermal power, nuclear power and other operations. The chief operation decision maker is the Board of Directors.

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 2018 except for the following amendments to existing standards which have been applied for from 1 January 2019 on.

- IFRS 16 Leases - The Group has adopted the standard retrospectively from 1 January 2019, but has not restated comparatives for the 2018 reporting period, as permitted under the specific transition provisions in the standard. The reclassifications and the adjustments arising from the new leasing rules are therefore recognised in the opening balance sheet on 1 January 2019. The new accounting policies are disclosed in note 19. The adoption of IFRS 9 from 1 January 2018 resulted in changes in classification of financial assets but did not result in any adjustments in the financial statements.

The adoption of the following amendments and interpretations to existing standards on 1 January 2018 has no impact on the consolidated financial statements:

- IFRIC 23 (interpretation) 23 Uncertainty over Income Tax Treatments
- IFRS 9 (amendment) Financial instruments Prepayment Features with Negative Compensation
- IAS 28 (amendment) Long-term Interests in Associates and Joint Ventures
- Annual improvements to IFRS 2015-2017
- IAS 19 (amendment) Employee benefits

The Group will adopt the following standards, interpretations and amendments to existing standards and interpretations in its 2020 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 17 Insurance Contracts*
- IAS 1 (amendment) and IAS 8 (amendment) – definition of material
- IFRS 3 Business combination (amendment) – definition of a business*
- Revised Conceptual Framework for Financial Reporting

* 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.

The Group has not recorded any provisions on litigations. The Group did not have any ongoing or expectable litigation that would have required judgement on provision recording.

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.

Environmental provisions are based on management's best estimate of landscaping costs. Environmental provisions consist of Asset Retirement Obligations of landfills which relate to ash storage in thermal power business. The Group recognizes a provision on estimated landscaping costs. The cost estimate is annually reviewed.

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 2019 100 million Euros out of the commercial paper program was in use (31 December 2018: 85 million Euros).

In addition to liquid assets Pohjolan Voima Group's liquidity is secured by 300 million Euros (31 December 2018: 300) revolving credit facility as well as by shareholder loan commitments of 90 million Euros (31. December 2018: 90). 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 at 31 December 2019 (as well as per 31 December 2018). The shareholder loan commitments were also undrawn as at 31 December 2019 (as well as per 31 December 2018).

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

2019							
1 000 €	2020	2021	2022	2023	2024-	Total	Balance sheet
Loans from financial institutions *	-107 050	-170 300	-170 300	-2 800	-2 834	-453 285	-453 285
Finance costs **	-4 239	-4 067	-1 124	-23	-10	-9 462	
Bonds				-125 000	-150 000	-275 000	273 885
Finance costs	-2 191	-4 383	-4 063	-4 063	-3 750	-18 449	
Loan from the State Nuclear Waste Management Fund (TVO) ***					-195 433	-195 433	-195 433
Finance costs	-991	-991	-991	-991	-991	-4 956	
Lease liabilities****	-21 570	-13 023	-40 869	-12 555	-102 031	-190 047	-187 720
Finance costs	-1 075	-1 139	-923	-723	-3 591	-7 450	
Commercial papers	-99 849					-99 849	-99 849
Finance costs	-151					-151	
Interest rate derivatives	-2 735	-2 719	-2 594	-2 323	-2 259	-12 629	-10 154
Total	-239 850	-196 621	-220 864	-148 478	-460 898	-1 266 712	

* Repayments to be made in 2020 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 and the State Nuclear Waste Management Fund is entitled to ask securing collateral for the loan.

Undiscounted cash flows of financial liabilities

2018							
1 000 €	2019	2020	2021	2022	2023-	Total	Balance sheet
Loans from financial institutions *	-5 800	-212 050	-282 800	-107 800	-5 634	-614 086	-614 086
Finance costs **	-6 377	-6 204	-4 801	-626	-40	-18 048	
Bonds					-125 000	-125 000	-125 000
Finance costs	-2 188	-2 191	-2 184	-2 188	-2 188	-10 937	
Loan from the State Nuclear Waste Management Fund (TVO) ***					-195 859	-195 859	-195 859
Finance costs	-2 286	-2 272	-2 272	-2 272	-2 272	-11 374	
Finance lease liabilities	-23 840	-89 957	-7 280	-35 454	-45 835	-202 365	-202 365
Finance costs	-620	-503	-408	-369	-976	-2 877	
Commercial papers	-84 892					-84 892	-84 892
Finance costs	-111					-111	
Interest rate derivatives	-1 713	-2 247	-2 238	-2 128	-3 731	-12 057	-6 304
Total	-127 828	-315 424	-301 984	-150 837	-381 535	-1 277 608	

* Repayments to be made in 2019 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.

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.

Variable rate borrowings amounted to 77% (2018: 90%) of the Group's total borrowings. Interest rate swaps currently in place cover approximately 27% (2018: 24%) of the variable loan principal outstanding. The fixed interest rates of the interest rate swaps range between 0,16% and 1,39% (2018: 0,16% and 1,39%).

As per 31 December 2019 the increase or decrease of one percentage point in the interest rate would affect the result of the year by approximately +9.4/-14.1 (31 December 2018: +10.8/-15.1) 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 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 2019 and 2018.

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 did not recognise impairment (2018: 56.7 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.

Pohjolan Voima supplies electricity and heat only to its shareholders who according to the Articles of Association are obliged to pay variable and fixed costs of the energy delivered. Accounts receivable relating to energy delivery has not faced any credit losses in the past and no impairment is expected. Other accounts receivable are immaterial and credit losses on them extraordinary. Loan receivables are shareholder loan granted to Teollisuuden Voima Oyj, the joint venture and on the basis of the assessment made by the Group do not carry any impairment risk.

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.

	2019	2018
Equity on assets ratio (%) (IFRS, Group) *	39	39

$$* \text{ Equity on assets ratio} \% = 100 \times \frac{\text{Shareholders' equity}}{\text{Balance sheet total}}$$

4 SEGMENT INFORMATION

The Group has four reportable segments: hydropower, thermal power, nuclear power and other operations.

The electricity of the hydropower segment is produced at eight hydro power plants owned by PVO-Vesivoima Oy. In addition, the shareholdings in Torniolaakson Voima Oy, Länsi-Suomen Voima Oy and Voimalohi Oy belong to the hydropower segment.

The electricity and heat of the thermal power segment is produced at the power plants of Hämeenkyrön Voima Oy, Kaukaan Voima Oy, Kymin Voima Oy, Laanilan Voima Oy, Porin Prosessivoima Oy and Rauman Biovoima Oy. In addition, the shareholdings in joint venture Vaskiluodon Voima Oy and associate Oy Alholmens Kraft Ab belong to the thermal power segment. Tahkoluodon Polttoöljy Oy is a dormant company.

The nuclear power segment includes the share in the joint venture Teollisuuden Voima Oyj which produces electricity at two nuclear power plant units, Olkiluoto 1 and Olkiluoto 2. Nuclear power plant unit Olkiluoto 3 is under construction.

The other operations cover the group functions of the parent company Pohjolan Voima Oyj, the service companies PVO Power Management Oy, PVO Power Services Oy and the dormant company Rouhialan Voimansiirto Oy. The operations of PVO-Lämpövoima Oy are presented as discontinued operations.

The Group discloses sales, depreciation, amortisation and impairment, finance income and costs, the profit or loss for the year, and assets and liabilities by business segments, which the chief operation decision maker follows. Group's liabilities are allocated to segments based on the usage of segment's assets in order to allocate financial costs to various production types. The group company that has withdrawn the liability bears the legal responsibility on the liabilities.

2019

Income statement	Hydropower	Thermal power	Nuclear power	Other	Total	Discontinued operations
Sales, external	12 428	233 987	134 615	40 570	421 600	275
Sales, inter-segment	12 068	126 689		21 022	159 779	4 509
Elimination					-164 288	
Sales total	24 496	360 676	134 615	61 592	417 091	4 783
Depreciation, amortisation and impairment	-4 651	-34 601		-642	-39 894	-364
Share of (loss)/profit of associates and joint ventures	-32	-1 208	44 962		43 723	
Operating profit or loss	-2 507	975	44 962	1 275	44 704	2 893
Finance income and costs	-1 393	-2 228	-6 796	-4 310	-14 728	34
Income taxes	-1			-1	-2	
Profit/loss for the year from continuing and discontinued operations	-3 901	-1 253	38 166	-3 037	29 975	2 927
Assets						
Non-current assets	432 783	386 732	1 100 804	38 853	1 959 172	
Current assets	4 270	74 576	0	86 291	165 137	
Elimination					-20 673	
Current assets total					144 464	
Assets held for sale		2 768			2 768	
Total assets	437 053	464 076	1 100 804	125 144	2 106 404	
Liabilities						
Non-current liabilities						
Non-current liabilities	134 861	171 637	680 387	0	986 885	
Other non-current liabilities					10 154	
Non-current liabilities total					997 039	
Current liabilities						
Current liabilities	6 608	105 508	42 409	144 300	298 825	
Elimination					-20 673	
Current liabilities total					278 152	
Total liabilities	141 469	277 145	722 796	144 300	1 275 191	

2018

	Hydropower	Thermal power	Nuclear power	Other	Total	Discontinued operations
Income statement						
Sales, external	6 225	266 280	178 298	63 296	514 100	634
Sales, inter-segment	16 884	123 938		32 506	173 327	4
Elimination					-173 331	
Sales total	23 109	390 218	178 298	95 802	514 096	638
Depreciation, amortisation and impairment	-4 567	-34 229		-251	-39 048	363
Share of (loss)/profit of associates and joint ventures	-22	-4 294	-15 218		-19 535	
Operating profit or loss	-1 947	-3 246	-15 218	12 960	-7 451	2 520
Finance income and costs	-1 326	-12 951	-7 163	-3 469	-24 909	91
Profit for the year from continuing and discontinued operations	-3 272	-16 197	-22 381	9 490	-32 360	2 611
Assets						
Non-current assets	435 070	409 594	1 060 422	37 671	1 942 758	
Current assets	6 080	82 639	0	84 982	173 701	
Elimination					-17 666	
Current assets total					156 035	
Assets held for sale		4 653			4 653	
Total assets	441 150	496 886	1 060 422	122 654	2 103 446	
Liabilities						
Non-current liabilities						
Non-current liabilities	137 000	243 157	723 222	7 638	1 111 017	
Other non-current liabilities					6 293	
Non-current liabilities total					1 117 310	
Current liabilities						
Current liabilities	4 668	64 584	0	117 658	186 910	
Elimination					-17 666	
Current liabilities total					169 244	
Total liabilities	141 668	307 741	723 222	125 296	1 286 554	

5 SOLD NON-CURRENT ASSETS AND BUSINESS COMBINATIONS

Sold non-current assets

There were no sold non-current assets in 2019 or in 2018.

Business combinations

There were no business combinations in 2019 or in 2018.

6 NOTES TO THE STATEMENT OF CASH FLOWS

Adjustments to profit or loss for the year (1 000 €)	2019	2018
Depreciation and amortisation	40 257	39 410
Increase/decrease in fair value of derivatives	4 057	3 368
Income taxes	2	0
Gains (+) or losses (-) from disposal of non-current assets	-1 962	-2 373
Finance costs - net	10 636	21 450
Share of (loss)/profit of associates and joint ventures	-43 723	19 535
Other adjustments	-328	-2
Total	8 939	81 388
Change in net working capital		
Increase (-) or decrease (+) in non-interest-bearing receivables	10 562	2 259
Increase (-) or decrease (+) in inventories	4 641	-3 280
Increase (+) or decrease (-) in current non-interest-bearing liabilities	-6 820	-4 898
Change in provisions	-35	-1 144
Total	8 348	-7 063

7 SALES

1 000 €	2019	2018
Sales of electricity produced	253 510	339 355
Sales of heat produced	140 847	138 304
Sales of purchased electricity	13 448	28 230
Other sales	9 287	8 208
Total	417 091	514 096

Electricity delivered to shareholders (GWh)		
Electricity produced	11 666	11 985
Heat produced	3 709	3 958
Purchased electricity	415	532

PVO's electricity purchases are determined by the electricity required by the shareholders. In 2019, Pohjolan Voima Group's total electricity purchases from continuing operations were 12.1 (12.5) TWh. The Group's electricity generation accounted for 11.7 (12.0) TWh, of which the parent company delivered to its shareholders 11.2 (11.6) TWh. Subsidiaries supplied 0.5 (0.4) TWh to other owners. Purchases from continuing operations from the Nordic electricity market, were 0.4 (0.5) TWh and sales were 0.4 (0.3) TWh. Heat deliveries were 4.2 (4.4) TWh.

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

8 OTHER OPERATING INCOME

1 000 €	2019	2018
Rental income	492	532
Gain on sale of property, plant and equipment as well as subsidiaries and joint ventures	243	438
Government grants	4	6
Other income	1 788	1 992
Total	2 527	2 968

9 MATERIALS AND SERVICES

1 000 €	2019	2018
Fuels	93 409	97 094
Change in inventories	2 199	-6 020
Materials and services	2 272	2 297
Emissions allowances - carbon dioxide	4 174	2 362
Energy purchased; Nordic electricity market	17 546	31 355
Energy purchased; Associates and Joint ventures	188 612	267 125
Energy purchased; other	5 272	1 869
External services	6 336	6 453
Total	319 819	402 536

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.

10 PERSONNEL EXPENSES

Personnel-related expenses

1 000 €	2019	2018
Wages and salaries	7 055	8 220
Pension expenses - defined contribution	1 241	1 511
Other personnel expenses	206	227
Total	8 502	9 959

Average number of personnel

	2019	2018
Salaried employees	64	80
Wage-earners	25	26
Total	89	106

Above average number of personnel includes personnel of discontinued operations in total 8 in 2019 (2018: 12).

Out of this salaried employees amount to 8 (2018: 11) and there were no wage-earners in 2019 (2018: 1).

11 DEPRECIATION, AMORTISATION AND IMPAIRMENT

1 000 €	2019	2018
Amortisation of intangible assets		
Intangible rights	42	42
Other intangible assets	559	775
Total	601	817
Depreciation of property, plant and equipment		
Land and water areas	309	0
Buildings and constructions	5 547	4 995
Machinery and equipment	31 090	30 813
Other assets	2 347	2 422
Total	39 293	38 230
Depreciation, amortisation and impairment total	39 894	39 048

Depreciation include the effect of IFRS 16 implementation on asset retirement obligations.

12 OTHER OPERATING EXPENSES

1 000 €	2019	2018
Repair, servicing and maintenance services	14 614	13 552
Real estate taxes	6 104	6 058
Rents	237	1 338
Operation services	15 107	17 033
Other expenses	14 359	15 456
Total	50 422	53 437

Auditor's fees

1 000 €	2019	2018
Audit fees	189	172
Tax advisory	3	5
Other services	16	9
Total	208	185

13 RESEARCH & DEVELOPMENT

Research and development recognised as an expense during the period totalled 84 thousand euros in 2019 (62 thousand euros in 2018).

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

1 000 €	2019	2018
Länsi-Suomen Voima Oy	0	-54
Oy Alholmens Kraft Ab	-435	-54
Tahkoluodon Polttoöljy Oy	0	0
Teollisuuden Voima Oyj	44 962	-15 218
Torniolaakson Voima Oy	-42	31
Vaskiluodon Voima Oy	-773	-4 241
Voimalohi Oy	11	0
Total	43 723	-19 535

Teollisuuden Voima Oyj's result 2019 changed compared to prior year as TVO updated the cost estimate based on the new technical plan and schedule for nuclear waste management, which resulted in a change to the nuclear waste management liability provision. TVO also changed the discount rate of interest for the nuclear waste management liability calculation.

Investments in associates and joint ventures are disclosed in note 20.

15 FINANCE INCOME AND COSTS

1 000 €	2019	2018
Dividend income on available-for-sale investments	0	6
Interest income on loans and receivables	3 249	2 722
Finance income total	3 249	2 728
Interest expense on liabilities at amortized costs	12 006	10 659
Derivative financial instruments (hedge accounting is not applied)		
Fair value losses	4 057	3 368
Other finance cost	1 914	2 733
Impairment of investments in non-current assets	0	10 877
Finance costs total	17 976	27 637
Total finance income and costs	-14 727	-24 909

16 INCOME TAX

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:

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

1 000 €	2019	2018
Result before income tax	29 977	-32 360
Tax based on Finnish tax rate 20%	-5 995	6 472
Share of profits and losses of associates and joint ventures	8 849	-3 627
Non-deductible expenses	-89	-2 265
Unrecognised deferred taxes due to cost price principle	-1 429	-1 444
Tax losses excluding the deferred tax asset for previous periods	-1 338	864
Income taxes recognised in consolidated income statement	-2	0

17 INTANGIBLE ASSETS

1 000 €	Emission allowances - carbon dioxide	Intangible rights	Other intangible assets	Total
Cost or valuation at 1.1.2019	2 032	281 158	17 933	301 123
Additions	3 622		763	4 385
Disposals	-2 266		-1 002	-3 268
Reclassifications			139	139
At 31.12.2019	3 388	281 158	17 833	302 379
Accumulated amortisation and impairment 1.1.2019	0	1 361	15 589	16 950
Disposals			-831	-831
Amortisation for the period		42	559	601
Accumulated amortisation and impairment 31.12.2019	0	1 403	15 317	16 720
Closing net book amount 31.12.2019	3 388	279 755	2 516	285 659
Closing net book amount 31.12.2018	2 032	279 797	2 344	284 173

1 000 €	Emission allowances - carbon dioxide	Intangible rights	Other intangible assets	Total
Cost or valuation at 1.1.2018	773	281 158	17 961	299 892
Additions	2 088		15	2 103
Disposals	-829		-395	-1 224
Reclassifications			352	352
At 31.12.2018	2 032	281 158	17 933	301 123
Accumulated amortisation and impairment 1.1.2018	0	1 319	15 209	16 528
Disposals			-395	-395
Amortisation for the period		42	775	817
Accumulated amortisation and impairment 31.12.2018	0	1 361	15 589	16 950
Closing net book amount 31.12.2018	2 032	279 797	2 344	284 173
Closing net book amount 31.12.2017	773	279 839	2 752	283 364

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 testing

In impairment testing discounted cash flows are analysed and the analysis is supplemented by comparing the valuation calculations to realized sales prices of hydropower sites or shares and other market data. The testing has been done by using value in use method. Testing unit is hydropower segment. The calculation model includes estimate of 50 years and the terminal value. The price of electricity is obtained from quotations of derivatives for the first five years and after that the estimate is based on the market forecasts of various service providers. The discount rate applied is 4.2% and weighted average capital cost has been used in the discount rate calculation. Impairment test has not resulted in any need for impairment, because the future generated cash flows exceed the carrying value of the right to produce hydro power and the water area usage permanent right . The implementation of IFRS 16 has not affected the calculation.

In the sensitivity analysis the electricity market price change of +/- 5% would change the value of the tested business by approximately +/- 125 million Euros. The change of the weighted average capital cost of +/- 0.5 percentage point would accordingly affect approximately +/- 325 million Euros. None of the presented negative change would result in impairment of the tested assets.

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

18 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 1.1.2019	33 779	128 935	719 873	83 463	5 515	971 566
IFRS 16 additions 1.1.2019	6 934	1 890	355	1 747		10 926
Additions	740	194	260	272	3 548	5 014
Disposals	-124	-117	-149			-390
Change in accounting estimates				18		18
Reclassifications			5 318		-5 457	-139
Cost or valuation 31.12.2019	41 329	130 902	725 657	85 500	3 606	986 995
Accumulated depreciation 1.1.2019	0	54 571	370 344	49 211	0	474 126
Disposals and reclassifications		-25	-36			-61
Depreciation for the period	309	5 547	31 090	2 347		39 293
Amortisation and impairment, discontinued operations				363		363
Accumulated depreciation 31.12.2019	309	60 093	401 398	51 921	0	513 721
Net book amount 31.12.2019	41 020	70 809	324 260	33 578	3 606	473 274
Net book amount 31.12.2018	33 779	74 364	349 530	34 251	5 515	497 440

1 000 €	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Prepayments	Total
Cost or valuation at 1.1.2018	33 824	129 030	717 903	83 468	2 519	966 745
Additions		12	-35	4	5 381	5 362
Disposals	-45	-135		-9		-189
Reclassifications		28	2 005		-2 385	-352
Cost or valuation 31.12.2018	33 779	128 935	719 873	83 463	5 515	971 566
Accumulated depreciation 1.1.2018	0	49 711	339 531	46 426	0	435 668
Disposals and reclassifications		-135				-135
Depreciation for the period		4 995	30 813	2 423		38 231
Amortisation and impairment, discontinued operations				362		362
Accumulated depreciation 31.12.2018	0	54 571	370 344	49 211	0	474 126
Net book amount 31.12.2018	33 779	74 364	349 530	34 251	5 515	497 440
Net book amount 31.12.2017	33 824	79 319	378 373	37 041	2 519	531 077

In 2019 and 2018 the asset retirement obligation of one landfill was revised.

Management has assessed that no indications of impairment exists.

The items classified as finance lease agreements in the financial statements 2018 are presented as leases, that are disclosed in the note 19, from 2019 on.

Property, plant and equipment included finance leases as at 31 December 2018 as follows:

1 000 €	Machinery and equipment
31.12.2018	
Cost	325 376
Disposals and reclassifications	0
Accumulated depreciation	-139 846
Net book amount	185 530

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 1.1.2019	460	15 642	111	16 213
Additions				0
Disposals				0
Cost or valuation at 31.12.2019	460	15 642	111	16 213
Accumulated depreciation 1.1.2019	289	7 534	72	7 896
Disposals				0
Depreciation for the period	19	615	4	638
Accumulated depreciation 31.12.2019	308	8 149	76	8 534
Net book amount 31.12.2019	152	7 492	35	7 679
Net book amount 31.12.2018	171	8 107	39	8 317

1 000 €	Buildings and constructions	Machinery and equipment	Other tangible assets	Total
Cost or valuation at 1.1.2018	460	15 642	111	16 213
Additions				0
Disposals				0
Cost or valuation at 31.12.2018	460	15 642	111	16 213
Accumulated depreciation 1.1.2018	270	6 919	68	7 258
Disposals				0
Depreciation for the period	19	615	4	638
Accumulated depreciation 31.12.2018	289	7 534	72	7 896
Net book amount 31.12.2018	171	8 107	39	8 317
Net book amount 31.12.2017	190	8 722	43	8 955

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.

19 LEASES

CHANGES IN ACCOUNTING POLICIES

The Group started to apply IFRS 16 from 1 January 2019 with the modified retrospective approach and does not restate previous periods. IFRS 16 Leases, issued in January 2016, sets out the principles for the recognition, measurement, presentation and disclosure of leases. The objective is to ensure that lessees and lessors provide relevant information in a manner that faithfully represents those transactions. This information gives a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of the entity. IFRS 16 has been endorsed by EU in November 2017 and is effective for annual periods beginning on or after 1 January 2019.

IFRS 16 supersedes IAS 17 Leases and IFRIC 4 Determining whether an Arrangement contains a Lease. The standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases. At transition, lease liabilities are measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate, which is a rate that the lessee would pay by borrowing the corresponding balance for equal period and with equal collaterals. Right-of-use assets are measured an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments. The Group allocates the consideration in the contract to each lease component and will separate non-lease components if these are identifiable. Right-of-use assets are initially measured at cost, which comprises the initial amount of the lease liability adjusted mainly for lease payments made at or before the commencement date. The right-of-use assets are subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the lease term or the end of the useful life of the right-of-use asset. Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Group's incremental borrowing rate. The lease term applied corresponds to the non-cancellable period except in case where the Group is reasonably certain to exercise renewal option of prolonging the contract. The lease liabilities are measured at amortised cost. The Group has decided to use the exemption not to apply the new guidance to leases with a terms less than twelve months or to leases for which the underlying asset value is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. The Group reviewed its leasing, service and utility purchase contracts to calculate the effects of IFRS 16. Its balance sheet impact is considered insignificant proportional to the Group's total assets. Contracts consist mainly of leases related to land areas and facilities. Asset retirement obligations included in the leasing agreements have been considered in the implementation.

The effect of application of IFRS 16 is presented in the tables below.

1 000 €	31.12.2018	IFRS 16 adjustm.	1.1.2019
ASSETS			
Non-current assets			
Property, plant and equipment	497 440	10 926	508 366
LIABILITIES			
Non-current liabilities			
Provisions	3 345	1 747	5 092
Borrowings	1 107 672	8 370	1 116 042
Current liabilities			
Borrowings	114 533	809	115 342

The below reconciliation to opening balance for the lease liabilities as of 1 January 2019 is based upon the operating lease commitments as of 31 December 2018:

Operating lease commitments 31.12.2018	2 298	
Reasonably certain extension options	9 910	
Gross lease liabilities at 1.1.2019	12 208	
Discounting*	-3 029	
Lease liability 1.1.2019	9 179	
Of which are:		
Current lease liabilities	809	
Non-current lease liabilities	8 370	
	9 179	

*The lease liabilities were discounted at incremental borrowing rate as at 1.1.2019. The incremental borrowing rate was 1,97%.

AMOUNTS RECOGNISED IN THE STATEMENT OF PROFIT OR LOSS

The statement of profit or loss shows the following amounts relating to leases:

Depreciation charge of right-of-use assets		
1 000 €	2019	2018
Land and water areas	309	-
Buildings	547	-
Machinery and equipment	14 264	-
Others	221	-
Total	15 341	-
Interest expense (included in finance cost)	1 020	-
Expense relating to short-term leases	10	-
Expense relating to leases of low-value assets that are not shown above as short-term leases	42	-

The total cash outflow of leases in 2019 was 10 241 thousand Euros.

In the previous year leases included depreciation and interests that related to lease agreements classified as finance leases according to IAS 17 Leases. Depreciation were presented as depreciation of property, plant and equipment in the income statement and the balance sheet presented in the note 18. Interests were part of Group's interest expenses.

AMOUNTS RECOGNISED IN THE BALANCE SHEET

This note provides information for leases where the group is a lessee.

The balance sheet shows the following amounts relating to leases:

Right-of-use assets		
1 000 €	2019	1.1.2019
Land and water areas	7 311	6 934
Buildings	1 445	1 890
Machinery and equipment	163 568	185 885
Others	1 798	1 747
Total	174 122	196 456
Provisions	1 798	1 747
Lease liabilities		
Current	21 408	24 649
Non-current	166 312	186 896
Total	187 720	211 544

In the previous year, the Group only recognised lease assets and lease liabilities in relation to leases that were classified as finance leases under IAS 17 Leases. The assets were presented in property, plant and equipment and the

liabilities as part of the group's borrowings. For adjustments recognised on adoption of IFRS 16 on 1 January 2019, please refer to the beginning of this note.

Additions to the right-of-use assets 1.1.2019 were 10 926 thousand Euros and additions during the 2019 were 1 416 thousand Euros.

20 INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

1 000 €	2019	2018
At 1 January	714 625	744 184
Disposals	0	-3 313
Impairment	0	-10 877
Share of profit	43 723	-19 535
Other comprehensive income	-4 581	4 166
At 31 December	753 768	714 625

Associates and Joint Ventures

Company, domicile	Interest held % 2019	2018	Book value 2019	2018
Associates				
Oy Alholmens Kraft Ab, Pietarsaari	49,90%	49,90%	18 014	18 449
Länsi-Suomen Voima Oy, Harjavalta	19,90%	19,90%	33 598	33 598
Tahkoluodon Polttoöljy Oy, Pori	32,00%	32,00%	0	0
Tomioakson Voima Oy, Ylitornio	50,00%	50,00%	1 904	1 946
			53 516	53 993
Joint Ventures				
Teollisuuden Voima Oy, Helsinki	57,06%	57,06%	691 651	651 269
Vaskiluodon Voima Oy, Vaasa	50,00%	50,00%	8 399	9 172
Voimalohi Oy, Kemi	50,00%	50,00%	202	191
			700 252	660 632
Associates and joint ventures total			753 768	714 625

Pohjolan Voima accounts for Teollisuuden Voima Oyj as a joint venture in the IFRS consolidated financial statements. Pohjolan Voima Oyj owns 57.06 % of the share capital of Teollisuuden Voima Oyj at 31 December 2019 (31 December 2018: 57.06 %). 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.

In 2018 Pohjolan Voima sold TVO's shares that entitled to the proportion of Meri-Pori power plant production volume. The title passed 31 December 2018. In connection with the arrangement Pohjolan Voima received return of share capital of 3,3 million Euros and recorded an impairment of 10,9 million Euros that was charged from Pohjolan Voima's shareholders of C2-series.

Teollisuuden Voima Oyj has investment commitments totalling 492 (440) 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 2019 (31 December 2018: 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 carrying value at 31.12.2019.

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 (-)
2019				
Oy Alholmens Kraft Ab	102 405	65 788	55 679	-872
Länsi-Suomen Voima Oy	39 741	12 398	3 467	256
Tahkoluodon Polttoöljy Oy	8	0	0	0
Teollisuuden Voima Oyj	7 941 881	6 122 485	254 208	87 196
Tomioakson Voima Oy	6 814	3 006	1 425	-17
Vaskiluodon Voima Oy	79 216	58 396	65 259	-310
Voimalohi Oy	1 217	802	3 825	1
Total	8 171 283	6 262 874	383 863	86 254

1 000 €	Assets	Liabilities	Revenue	Profit/ loss (-)
2018				
Oy Alholmens Kraft Ab	107 386	70 145	67 824	-107
Länsi-Suomen Voima Oy	40 407	13 335	3 166	-269
Tahkoluodon Polttoöljy Oy	8	0	0	0
Teollisuuden Voima Oyj	7 662 370	5 917 114	350 271	-18 226
Tomioalaakson Voima Oy	7 339	3 446	1 567	12
Vaskiluodon Voima Oy	87 338	64 806	98 141	-1 696
Voimalohi Oy	1 479	1 066	4 323	19
Total	7 906 327	6 069 912	525 292	-20 267

Related-party transactions - transactions with associates and joint ventures

1 000 €	2019	2018
Sales to associates and joint ventures	5 217	8 999
Purchases from associates and joint ventures	240 430	260 210
Receivables from associates and joint ventures	458 268	461 126
Liabilities to associates and joint ventures	205 151	210 855
	2019	2018
Personnel employed by associates and joint ventures in average	1 024	959

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 2019	TVO Group 2018
Summary of the balance sheet		
Current		
Cash and cash equivalents	237 832	221 166
Other current assets	358 977	415 474
Current assets in total	596 809	636 640
Financial liabilities (excl. trade payables)	-422 769	-459 513
Other current liabilities (incl. trade payables)	-138 390	-158 590
Current liabilities in total	-561 159	-618 102
Non-current		
Assets	7 345 072	7 025 730
Financial liabilities	-5 561 325	-5 299 011
Non-current liabilities in total	-5 561 325	-5 299 011
Net assets	1 819 397	1 745 257

	2019	2018
Summary of the statement of comprehensive income		
Sales	254 208	350 271
Depreciation	-45 488	-55 181
Finance income	11 550	13 170
Finance costs	-76 700	-47 435
Profit/loss from continuing operations before income tax	87 196	-18 226
Income tax expense	0	0
Profit/loss from continuing operations after income tax	87 196	-18 226
Other comprehensive income	-8 028	7 125
Profit/loss from continuing operations	79 168	-11 101

TVO's result 2019 changed compared to prior year as TVO updated the cost estimate based on the new technical plan and schedule for nuclear waste management, which resulted in a change to the nuclear waste management liability provision. TVO also changed the discount rate of interest for the nuclear waste management liability calculation.

	2019	2018
Summary of the financial information		
Net assets at 1 January	1 745 257	1 666 694
Profit/loss for the year	79 168	-11 101
The change and interest of subordinated shareholder loans	-5 028	95 488
Decrease of share capital	0	-5 825
Net assets at the end of the period	1 819 397	1 745 257
Group ownership %	57,06%	57,06%
Group ownership share	1 038 148	995 843
Subordinated shareholder loans	-387 609	-387 609
IFRS-entries relating to the valuation	41 112	43 034
Book value	691 651	651 269

21 OTHER FINANCIAL ASSETS

1 000 €	2019	2018
Investments in non-listed securities	484	486
Total	484	486

Other financial assets consist mainly of vacation cottage and golf shares used by personnel totalling 0.5 million Euros (2018: 0.5).

22 LOANS AND OTHER RECEIVABLES

Non-current loans and other receivables

1 000 €	2019	2018
Loans to associates and joint ventures	409 153	409 153
Other non-current receivables	36 833	36 881
Total	445 987	446 034

Loans to associates and joint ventures include a loan receivable from Teollisuuden Voima Oyj of 409.2 (2018: 409.2) 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 31 Fair values of financial assets.

Trade and other receivables

1 000 €	2019	2018
Trade receivables	51 109	58 461
Pledged cash deposits	153	184
Prepayments and accrued income	20 176	24 029
Other current receivables	1 527	1 724
Total	72 966	84 399

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

Prepayments and accrued income:

1 000 €	2019	2018
Prepayments, energy purchases	9 908	12 402
Indirect taxes	4 593	5 321
Other	5 675	6 306
Total	20 176	24 029

The Group did not record credit losses in 2019 (2018: 56.7 thousand euros) on trade receivables or other receivables. The Group had no material outstanding receivables as per 31 December 2019. Therefore, the aging of trade receivables are not presented.

23 SHORT-TERM DEPOSITS, CASH AND CASH EQUIVALENTS

CASH AND CASH EQUIVALENTS

1 000 €	2019	2018
Cash at bank and on hand	62 367	59 598
Total	62 367	59 598

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

24 INVENTORIES

1 000 €	2019	2018
Fuels		
Coal	2 100	2 409
Other fuels	6 185	8 075
Prepayments	846	1 554
Total	9 131	12 038

No inventory impairment was recorded from continued operations (2018: not recorded) and from discontinued operations (2018: not recorded) in 2019.

25 DISCONTINUED OPERATIONS AND ASSETS HELD FOR SALE

Discontinued operations

1 000 €	2019	2018
Income	9 978	10 493
Costs	-7 051	-7 882
Profit before income tax	2 927	2 611
Profit from discontinued operations	2 927	2 611

Cash flow from discontinued operations

1 000 €	2019	2018
Cash flows from operating activities	-1 358	2 901
Cash flows from investing activities	1 236	2 178
Cash flows total	-122	5 079

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 2019 and 2018 as discontinued operations. PVO-Lämpövoima's tangible assets and inventory are presented as assets held for sale.

Assets held for sale

1 000 €	2019	2018
Tangible assets	2 556	2 708
Inventory	212	1 946
Total	2 768	4 653

There were no liabilities related to assets held for sale in 2019 nor 2018.

26 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 premium	Revaluation reserve	Reserve for invested non-restricted equity	Retained earnings	Total
1.1.2018	32 509 113	65 293	216 822	-2 466	328 869	192 792	801 310
Transfer to retained earnings and reserve for invested non-restricted equity					-2 186	2 186	0
Other comprehensive income				4 166		-29 098	-24 933
31.12.2018	32 509 113	65 293	216 822	1 700	326 683	165 879	776 377
Proceeds from share issue							0
Transfer to retained earnings and reserve for invested non-restricted equity		-9 972	-10 823		14 961	5 834	0
Refund of reserves					-14 000		-14 000
Other comprehensive income				-4 581		32 731	28 150
31.12.2019	32 509 113	55 321	205 999	-2 881	327 644	204 444	790 527

Shares

The number of shares at 31 December 2019 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	1 983
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 Voima 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
G10-sarja - 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 100,0% of the energy produced by Mussalon Voima Oy	307 707	2 921
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	55 321

The following shares were issued during the financial year:

There were no share issues subscribed in 2019.

Other changes in shareholders' equity:

Annual General Meeting of Pohjolan Voima Oy decided on 21 March 2019 to cover negative retained earnings of 5.8 million Euros by lowering the reserve of invested unrestricted equity fund by the same amount.

Subsequent to the decrease of restricted equity (share capital and share premium) of C-series 14 million Euros was refunded to the shareholders via the reserve for invested non-restricted equity. The rest of the decrease of the restricted equity was transferred to the reserve for invested non-restricted equity.

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. Further the reserve includes the portion of the C-series restricted equity decrease.

27 PROVISIONS

1 000 €	Environmental provisions	
At 1 January 2019	3 345	
IFRS 16 additions 1.1.2019	1 747	
Additions	272	
Disposals	-327	
Change in accounting estimates	18	
Effect of discounting	-35	
At 31 December 2019	5 020	

1 000 €	2019	2018
Non-current	5 020	3 345
Total	5 020	3 345

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 3.0 million Euros at 31 December 2019 and it is estimated that it will be fully utilised by 2030.

From 1 January 2019 on environmental provisions include the asset retirement obligations amounting to 1.7 million Euros according to IFRS 16 leases. The corresponding balance is included in property, plant and equipment. Additions recorded in 2019 amounted to 0.3 million Euros.

The discount rate used to determine present value was 1,18 %.

28 BORROWINGS

1 000 €	2019	2018
Non-current:		
Borrowings from associates and joint ventures	195 433	195 859
Borrowings from financial institutions	346 235	608 286
Bonds	273 885	125 000
Leases	166 312	178 527
Total	981 865	1 107 672
Current:		
Borrowings from financial institutions	107 050	5 800
Other interest-bearing current liabilities	99 849	84 893
Leases	21 408	23 840
Total	228 307	114 533
Total borrowings	1 210 172	1 222 205

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 195.4 (195.9) million Euros.

Pohjolan Voima Group had 7 finance lease contracts for power plant machinery with an average lease term of 10 years as at 31 December 2018. These agreements as well as other leases recorded in the balance sheet in adoption of IFRS 16 standard are included in the row Leases.

OTHER NON-CURRENT LIABILITIES

1 000 €	2019	2018
Other non-current liabilities		
Derivative financial liabilities		
Interest rate swaps	10 154	6 293
Total	10 154	6 293

Fair values of derivatives are disclosed in note 30.

INTEREST-BEARING NET LIABILITIES

1 000 €	2019	2018
Interest-bearing liabilities total	1 210 172	1 222 205
Interest-bearing financial assets		
Non-current		
Loan receivables	409 153	409 153
	409 153	409 153
Current		
Pledged cash deposits	153	184
Interest-bearing receivables	0	0
Cash and cash equivalents	62 367	59 598
Total	62 521	59 782
Interest-bearing financial assets total	471 674	468 935
Interest-bearing liabilities net	738 498	753 269

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								
1.1.2018	348 921	44 068	-195 405	-20 751	-845 206	-9 593	-109 782	-787 748
Cash flows	60 232	15 714	16 878	-3 089	-83 939	3 793	24 889	34 479
Net liabilities								
31.12.2018	409 153	59 782	-178 527	-23 840	-929 145	-5 800	-84 893	-753 269
Recognised on adoption of IFRS 16			-8 370	-809				
Cash flows	0	2 739	20 523	3 318	113 592	-101 250	-14 956	23 965
Changes in leases			62	-77				
Net liabilities								
31.12.2019	409 153	62 521	-166 312	-21 408	-815 553	-107 050	-99 849	-738 498

29 TRADE PAYABLES AND OTHER CURRENT LIABILITIES

1 000 €	2019	2018
Trade payables	13 872	13 508
Liabilities to associates and joint ventures	8 008	14 996
Accrued expenses	20 217	19 136
Other current liabilities	4 359	5 028
Held emission allowances, Energy Authority	3 388	2 032
Derivative financial instruments	0	11
Total	49 845	54 711

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 €	2019	2018
Accrued personnel expenses	2 357	2 295
Accrued expenses for fuel purchases	4 935	5 624
Accrued expenses for energy purchases	1 127	1 078
Accrued rents	1 219	1 355
Interest liabilities	2 954	2 972
Other	7 625	5 811
Total	20 217	19 136

30 DERIVATIVE FINANCIAL INSTRUMENTS

Fair value of derivative financial instruments

1 000 €	2019	2019	Total
	Positive fair values	Negative fair values	
Interest rate swaps	18	-10 172	-10 154
Total	18	-10 172	-10 154

1 000 €	2018	2018	Total
	Positive fair values	Negative fair values	
Interest rate swaps	13	-6 317	-6 304
Total	13	-6 317	-6 304

Nominal value of derivative financial instruments

1 000 €	2019	2018
Interest rate swaps	247 000	262 000

31 FINANCIAL ASSETS AND LIABILITIES BY CATEGORY AND FAIR VALUE HIERARCHY

1 000 €	31 Dec 2019	Fair value through profit and loss	Financial liabilities carried at amortised cost	Carrying value	Fair value, if deviates from carrying value	Note	Level 1	Level 2	Level 3
Non-current financial assets									
		484		484		21			484
			409 153	409 153		22			
			36 833	36 833		22			
		484	445 986	446 470					
Current financial assets									
			62 367	62 367		23			
			153	153		22			
			52 637	52 637		22			
			20 176	20 176		22			
		0	135 333	135 333					
Total		484	581 319	581 803					
Non-current financial liabilities									
			195 433	195 433		28			
			346 235	346 235		28			
			273 885	273 885	278 750	28	278 750		
			166 312	166 312		28			
		10 154		10 154		28		10 154	
		10 154	981 865	992 019					
Current financial liabilities									
			206 899	206 899		28			
			13 872	13 872		29			
			15 756	15 756		29			
			20 217	20 217		29			
			21 408	21 408		28			
		0	278 152	278 152					
Total		10 154	1 260 017	1 270 171			278 750	10 154	484

The fair values of financial assets and liabilities approximate carrying values except for bonds that are listed at Nasdaq Helsinki.

As at 31 December 2019 the amount of offsetting derivative instruments included in the financial assets and financial liabilities in the Group was -10.2 (2018: -6.3) million Euros.

	Gross amounts recognised in the balance sheet	Net amount						
1 000 €	31 Dec 2018	Fair value through profit and loss	Financial liabilities carried at amortised cost	Carrying value	Fair value, if deviates from carrying value	Note	Level 2	Level 3
Derivative contracts 2019	-10 154	-10 154						
Derivative contracts 2018	-6 304	-6 304						
Non-current financial assets								
Other financial assets		486		486		21		486
Loan receivables			409 153	409 153		22		
Other receivables			36 881	36 881		22		
		486	446 034	446 520				
Current financial assets								
Cash and cash equivalents			59 598	59 598		23		
Loan receivables			184	184		22		
Trade and other receivables			60 185	60 185		22		
Prepayments and accrued income			24 029	24 029		22		
		0	143 996	143 996				
Total		486	590 031	590 517				
Non-current financial liabilities								
Borrowings from associates and joint ventures			195 859	195 859		28		
Borrowings			733 286	733 286		28		
Finance lease liabilities			178 527	178 527		28		
Derivative financial instruments		6 293		6 293		28	6 293	
		6 293	1 107 672	1 113 965				
Current financial liabilities								
Loans and commercial papers			90 693	90 693		28		
Trade payables			13 508	13 508		29		
Other current liabilities			22 057	22 057		29		
Accrued expenses			19 136	19 136		29		
Secured financial liabilities			23 840	23 840		28		
Derivative financial instruments		11		11		29	11	
		11	169 233	169 244				
Total		6 304	1 276 905	1 283 209			6 304	486

Financial assets and liabilities by measurement categories

Financial instruments that are measured at fair value in the balance sheet are presented according to fair value measurement hierarchy:

Level 1: quoted prices in active markets for identical assets or liabilities. The bond with the nominal value of 125 million Euros issued by Pohjolan Voima Oyj in 2018, was listed to Nasdaq Helsinki in June 2019. Accordingly the bond with the nominal value of 150 million Euros issued in November 2019 was listed to Nasdaq Helsinki. Both bonds were classified at level 1 as at 31 December 2019. The fair value correspond the quotations. The Group did not have any financial assets or liabilities on level 1 in 2018.

Level 2: inputs other than quoted price included within level 1 that are observable for the assets or liability, either directly or indirectly.

Level 3: inputs for the assets or liability that is not based on observable market data.

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 the Group 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 0,47 % - 1,42 % (-0,46 - 0,89 %) (level 2). Fair values of forward foreign exchange contracts and swaps are determined using quoted forward rates from contracts with similar duration. The Group does not apply hedge accounting according to IFRS 9, so the changes in fair values for derivative instruments are recorded in the statement of comprehensive income.

The Group owns unlisted shares the market value of which is not reliably available. The fair value is determined by methods based on management's judgement (level 3).

32 CONTINGENT LIABILITIES AND ASSETS AND PURCHASE COMMITMENTS

1 000 €	2019	2018
On behalf of own loans		
Pledged deposits	40	70
Other contingent liabilities	4 962	203 705
On behalf of associated companies and joint ventures		
Guarantees	30	32
Guarantee according to Nuclear Energy Act	44 290	77 227
Total	49 322	281 034

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. As at 31.12.2018 a bank guarantee of 195.9 million Euros was given to the State Nuclear Waste Management Fund.

Guarantee under the Nuclear Energy Act

According to the Finnish Nuclear Energy Act, Teollisuuden Voima, a joint venture of which Pohjolan Voima owns 57.06%, 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 guarantee is valid for five years and it is annually renewed at the end of March. The directly enforceable guarantee given by Pohjolan Voima is 44.3 million Euros (2018: 77.2 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 421 million Euros. As at 31 December 2019 Pohjolan Voima Oyj has fulfilled 841 (2018: 841) 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

There were no major legal procedures pending during or at the end of the financial year.

33 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.

The Group has recorded from 1 January 2019 on these lease agreements as right-of-use-assets excluding leases with terms less than twelve months or to leases for which the underlying asset value is of low value, please see note 19.

1 000 €	2019	2018
No later than 1 year	-	652
Later than 1 year and no later than 5 years	-	1 647
Total	-	2 298

34 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.

	2019	1 000 €
	t CO₂	
Allowances received free of charge	259 237	
Combined annual emissions of the plants'	544 162	
Emission allowances held	1 830 785	
External sales of emission allowances *	0	0
External purchases of emission allowances **	167 187	4 174

	2018	1 000 €
	t CO₂	
Allowances received free of charge*	291 273	
Combined annual emissions of the plants'	604 231	
Emission allowances held	2 008 592	
External sales of emission allowances **	55 000	946
External purchases of emission allowances ***	180 557	2 362

* 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.

35 GROUP COMPANIES

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
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 Alhomens 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

36 RELATED-PARTY TRANSACTIONS

The Group's related parties include the parent company, 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 companies, in which they or their family members has control.

Transactions with related parties, 1000 €

Related party transactions relate to normal business operations of Pohjolan Voima. Pohjolan Voima has granted to Teollisuuden Voima Oyj, a joint venture, shareholder loans of 409 million Euros (2018: 409 million Euros). The management has assessed that the loan receivables do not include impairment risk. Teollisuuden Voima has used its right to borrow from State Nuclear Waste Management Fund and further granted a loan of 195 million Euros (2018: 196 million Euros) to Pohjolan Voima. Until 31 March 2019 Pohjolan Voima issued a bank guarantee to the Fund as security.

2019	Sales	Purchases	Receivables	Liabilities
Associates and joint ventures	5 217	240 430	458 268	205 151
UPM-Kymmene Group	158 844	65 020	13 226	9 551

2018	Sales	Purchases	Receivables	Liabilities
Associates and joint ventures	8 999	260 210	461 126	210 855
UPM-Kymmene Oyj	206 800	68 792	20 946	10 002

The Board of Directors and the Executive team

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

Salaries and benefits of the Board of Directors and the Executive team

1 000 €	2019	2018
Salaries and other short-term employee benefits - board members	462	476
Salaries and other short-term employee benefits - executive team	1 265	1 949
Total	1 727	2 425

No pension benefits were paid to the Board of Directors in 2019 and 2018.

Salaries and benefits of the CEO	CEO	Former CEO	
1 000 €	2019	2018	2018
Salaries and other short-term employee benefits	331	116	897
Statutory pension scheme	83	29	227
Voluntary pension plan	47	18	37
Total	462	163	1 161

37 BREAKDOWN OF SHARE OWNERSHIP AND SHAREHOLDER INFORMATION

Shareholder	2019	2018
	% of shares	% of shares
EPV Energia Oy	5,49%	5,49%
Etelä-Suomen Voima Oy	1,52%	1,48%
Helen Oy	0,62%	0,62%
Kemira Oyj (incl. Neliapila pension fund)	5,06%	5,06%
Keskinäinen Eläkevakuutusyhtiö Ilmarinen	1,83%	1,83%
Kokkolan Energia Oy	1,85%	1,85%
Kymppivoima Oy	5,91%	5,91%
Metsä Group (Metsäliitto, Metsä Fibre, Metsä Board Oyj)	3,66%	3,66%
Myllykoski Oyj *)	0,63%	0,63%
Oulun Energia Oy	0,91%	0,91%
Outokumpu Oyj	0,10%	0,10%
Oy Perhonjoki Ab	2,17%	2,17%
Town of Pori	1,37%	1,40%
Rautaruukki Oyj	0,09%	0,09%
Stora Enso Oyj	15,61%	15,61%
UPM Energy Oy	47,69%	47,69%
UPM Communication Papers Oy	3,46%	3,46%
Vantaan Energia Oy	0,23%	0,23%
Yara Suomi Oy (incl. Eläkesäätiö)	1,84%	1,84%
Total	100,00%	100,00%

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

Shareholders by sector	%	%
	of shares	of shares
Forest industry	71,04%	71,04%
Energy companies	18,68%	18,64%
Chemical industry	6,90%	6,90%
Metal industry	0,19%	0,19%
Other	3,20%	3,23%
Total	100,00%	100,00%

38 EVENTS AFTER THE REPORTING PERIOD

The Regional State Administrative Agency for Northern Finland announced on 25 February 2020 a change application by the Centre for Economic Development, Transport and the Environment for Lapland to amend the stocking and fish stock management obligations of the Iijoki river hydropower plants. PVO-Vesivoima intends to lodge its objection to the change application documents by 17 April 2020, during the period in which the public notice is displayed for viewing.

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. - 31.12.2019	1.1. - 31.12.2018
Revenue	2	351 055	446 596
Other operating income	3	350	206
Materials and services	4	-154 863	-183 532
Personnel expenses	5	-4 820	-6 284
Depreciation, amortisation and impairment	6	-760	-969
Other operating expenses	7	-190 437	-243 789
Operating profit or loss		525	12 228
Finance income and costs	8	-7 212	-18 285
Profit or loss before appropriations and taxes		-6 688	-6 057
Income tax expense	9	0	0
Profit or loss for the year		-6 688	-6 057

BALANCE SHEET

1 000 €	Note	31.12.2019	31.12.2018
ASSETS			
NON-CURRENT ASSETS			
Intangible assets	10	291	656
Property, plant and equipment	11	500	617
Investments	12		
Holdings in Group undertakings		402 610	416 610
Other investments		1 139 760	1 140 208
TOTAL NON-CURRENT ASSETS		1 543 162	1 558 091
CURRENT ASSETS			
Non-current receivables	13	36 829	36 860
Current receivables	14	56 534	67 303
Cash and cash equivalents		62 817	61 087
TOTAL CURRENT ASSETS		156 179	165 250
Total assets		1 699 341	1 723 341
EQUITY AND LIABILITIES			
EQUITY			
Share capital	15	55 321	65 293
Share premium		205 999	216 822
Revaluation reserve		218 644	218 644
Reserve for invested non-restricted equity		327 644	326 683
Retained earnings		-223	0
Profit or loss for the year		-6 688	-6 057
TOTAL EQUITY		800 698	821 385
LIABILITIES			
Non-current liabilities	16	680 433	730 859
Current liabilities	17	218 210	171 097
TOTAL LIABILITIES		898 643	901 956
Total equity and liabilities		1 699 341	1 723 341

CASH FLOW STATEMENT

1 000 €		1.1. - 31.12.2019	1.1. - 31.12.2018
Operating activities			
		525	12 228
		532	878
	1)	5 056	-2 594
	2)	-9 352	-7 529
		3 927	3 283
		0	6
		-1 825	-2 635
		0	-4
Cash flow from operating activities		-1 138	3 632
Investments			
		0	2
		0	-291
		0	2 972
		0	64
		14 000	3 310
		398	44
		0	-60 232
Cash flow from investing activities		14 398	-54 130
Financing			
		150 000	125 000
		-150 426	-28 138
		2 896	-29 625
		-14 000	0
Cash flow from financing activities		-11 530	67 237
Net (decrease)/increase in cash and cash equivalents		1 730	16 740
Cash and cash equivalents at 1.1.		61 087	44 347
Cash and cash equivalents at 31.12.		62 817	61 087
1) Adjustments to operating profit or loss			
		760	969
		-228	-91
		532	878
2) Change in net working capital			
		24 830	1 970
		-19 775	-4 564
		5 056	-2 594

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 Oy (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.

Derivative contracts and foreign currencies

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 foreign exchange rate and interest rate derivatives are disclosed in the notes.

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.

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 Oyj 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 €	2019	2018
Sales of electricity produced	241 549	334 876
Sales of heat produced	106 876	106 786
Other sales	2 630	4 934
Total	351 055	446 596

3 OTHER OPERATING INCOME

1 000 €	2019	2018
Gains on sale and dissolution of fixed assets and subsidiaries' shares	0	96
Rental income	118	103
Other income	232	7
Total	350	206

4 MATERIALS AND SERVICES

1 000 €	2019	2018
Energy purchases	154 863	183 532
Total purchases	154 863	183 532

5 PERSONNEL EXPENSES AND AVERAGE NUMBER OF PERSONNEL

1 000 €	2019	2018
Wages and salaries		
Board members and CEO	793	1 488
Other wages and salaries	3 202	3 702
Total	3 995	5 189
Pension expenses	695	933
Other personnel expenses	130	162
Total	825	1 095
Total personnel expenses	4 820	6 284
Average number of personnel		
Salaried employees	35	50
Total	35	50

6 DEPRECIATION, AMORTISATION AND IMPAIRMENT

1 000 €	2019	2018
Depreciation according to plan		
Other capitalised long-term expenditure	196	398
Buildings and constructions	46	46
Machinery and equipment	71	78
Investments	447	447
Total	760	969

7 OTHER OPERATING EXPENSES

1 000 €	2019	2018
Energy purchases	184 919	237 519
Repair, servicing and maintenance services	83	348
Rents	709	777
Real estate taxes	21	19
Fees to experts	2 609	2 730
Other expenses	2 096	2 396
Total	190 437	243 789

AUDITOR'S FEES

1 000 €	2019	2018
PricewaterhouseCoopers Oy:		
Audit fees	124	107
Tax advisory	3	4
Other services	16	9
Total	142	120

8 FINANCE INCOME AND COSTS

1 000 €	2019	2018
Dividend income from others	0	6
Interest income from investments in participating interests	3 029	2 717
Other interest and finance income from Group undertakings	923	726
from others	8	1
Total finance income	3 961	3 450
Interest costs and other financial costs		
Participating interests	-991	-993
Others	-10 181	-20 741
Total finance costs	-11 172	-21 734
Total finance income and costs	-7 211	-18 284
Other interest and financial income includes exchange rate differences (net).	0	0

9 INCOME TAXES

1 000 €	2019	2018
Income taxes for the period	0	0
Income taxes from previous periods	0	0
Total	0	0

NOTES TO BALANCE SHEET

10 INTANGIBLE ASSETS

1000 €	Other capitalised long-term expenditure	Total
Cost or valuation at 1.1.	5 272	5 272
Disposals	-1 002	-1 002
Reclassifications	0	0
Cost or valuation at 31.12.	4 270	4 270
Accumulated amortisation 1.1.	-4 615	-4 615
Accumulated amortisation of disposals and reclassifications	832	832
Amortisation for the period	-196	-196
Accumulated amortisation 31.12.	-3 979	-3 979
Net book amount 31.12.2019	291	291
Net book amount 31.12.2018	656	656

11 PROPERTY, PLANT AND EQUIPMENT

1000 €	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Total
Cost or valuation at 1.1.	99	868	1 083	46	2 096
Additions	-	-	-	-	0
Disposals	-	-	0	-	0
Cost or valuation at 31.12.	99	868	1 083	46	2 096
Accumulated depreciation 1.1.	-	-616	-862	-	-1 478
Accumulated depreciation of disposals and reclassifications	-	0	0	-	0
Depreciation for the period	-	-46	-71	-	-117
Accumulated depreciation 31.12.	-	-662	-933	-	-1 595
Net book amount 31.12.2019	99	206	150	46	500
Net book amount 31.12.2018	99	252	221	46	617

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.	422 831	741 448	409 153	483	1 573 916
Additions	-	-	-	-	0
Disposals	-14 000	-447	-	-	-14 447
Cost or valuation at 31.12.	408 831	741 001	409 153	483	1 559 469
Accumulated impairment 1.1.	-6 222	-10 877	-	-	-17 099
Accumulated impairment 31.12.	-6 222	-10 877	-	-	-17 099
Net book amount 31.12.2019	402 610	730 124	409 153	483	1 542 370
Net book amount 31.12.2018	416 610	730 571	409 153	483	1 556 818
Revaluations included in the cost at 31.12.	265 145				

13 NON-CURRENT RECEIVABLES

1 000 €	2019	2018
Capital loan receivables	1	1
Other non-current receivables	36 828	36 860
Total	36 829	36 860
Receivables from Group undertakings		
Capital loan receivables	1	1
Total receivables from Group undertakings	1	1
Receivables from participating interests		
Other non-current receivables	36 796	36 796
Total receivables from participating interests	36 796	36 796
Receivables from others		
Other non-current receivables	32	63
Total receivables from others	32	63

14 CURRENT RECEIVABLES

1 000 €	2019	2018
Trade receivables	37 894	46 618
Other receivables	1	1
Prepayments and accrued income	18 638	20 684
Total	56 534	67 303
Receivables from Group undertakings		
Trade receivables	947	20
Prepayments and accrued income	1 778	690
Total receivables from Group undertakings	2 725	710
Receivables from participating interests		
Trade receivables	1 788	7
Prepayments and accrued income	11 394	14 136
Total receivables from participating interests	13 183	14 143
Prepayments and accrued income:		
Accrued financial expenses	3 088	2 462
Accrued personnel expenses	8	11
Accrued interest income	789	760
Accrued sales of emission rights	1 433	1 476
Accrued arrangement fee for credit facility	0	535
Accrued VAT on prepayments	2 391	2 726
Accrued energy purchases, credit	966	112
Accrued energy purchases	9 908	12 402
Others	55	199
Total	18 638	20 684
Interest-bearing receivables		
Non-current assets	409 153	409 153
Current assets	62 817	61 087
Total	471 970	470 240

15 EQUITY

1 000 €	2019	2018
Share capital 1.1.	65 293	65 293
Transfer to reserve for invested non-restricted equity	-9 972	
Share capital 31.12.	55 321	65 293
Share premium 1.1.	216 822	216 822
Transfer to reserve for invested non-restricted equity	-10 823	0
Share premium 31.12.	205 998	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	326 683	328 869
Transfer from share capital	9 972	0
Transfer from share premium	10 823	0
Refund of reserves	-14 000	0
Transfer to retained earnings	-5 834	-2 186
Reserve for invested non-restricted equity 31.12	327 644	326 683
Retained earnings 1.1.	-6 057	-2 186
Transfer from reserve for invested non-restricted equity	5 834	2 186
Retained earnings 31.12.	-223	0
Profit or loss for the year	-6 688	-6 057
Total	800 697	821 385
Distributable earnings 31.12.		
Retained earnings	-223	0
Profit or loss for the year	-6 688	-6 057
Reserve for invested non-restricted equity	327 644	326 683
Total	320 733	320 625

Share capital by share category, see note 25 in the consolidated financial statements.

16 NON-CURRENT LIABILITIES

1 000 €	2019	2018
Bonds	275 000	125 000
Loans from financial institutions	210 000	410 000
Other non-current liabilities	195 433	195 859
Total	680 433	730 859
Liabilities to participating interests		
Other non-current liabilities	195 433	195 859
Non-interest-bearing and interest-bearing non-current liabilities		
Interest-bearing	680 433	730 859
Total	680 433	730 859

17 CURRENT LIABILITIES

1 000 €	2019	2018
Loans from financial institutions	50 000	-
Other interest-bearing liabilities	132 760	129 864
Trade payables	25 216	27 890
Other current liabilities	284	2 961
Accrued expenses	9 950	10 382
Total	218 210	171 097
<hr/>		
To Group undertakings		
Trade payables	18 113	15 500
Accrued expenses	2 096	580
To Group undertakings, total	20 209	16 080
<hr/>		
To participating interests		
Trade payables	6 910	12 131
Accrued expenses	2 704	2 755
To participating interests, total	9 613	14 886
<hr/>		
Accrued expenses		
Accrued personnel expenses	1 222	1 310
Accrued interest costs	3 730	3 738
Accrued energy sales, credit	966	1 256
Accrued energy purchases	1 709	1 761
Accrued emission right purchases	1 409	1 577
Others	914	740
Total accrued expenses	9 950	10 382
<hr/>		
Non-interest-bearing and interest-bearing current liabilities		
Non-interest-bearing	35 450	41 233
Interest-bearing	182 760	129 864
Total	218 210	171 097

18 GUARANTEES AND CONTINGENT LIABILITIES

1 000 €	2019	2018
Guarantees		
Guarantees for loans		
On behalf of participating interests	16	17
Other guarantees		
As security for own liabilities	139	196 037
Total guarantees	155	196 055
<hr/>		
Leasing liabilities		
Payments during the following year	72	16
Payments in subsequent years	103	14
Total leasing liabilities	174	30
<hr/>		
Rental liabilities		
Payments during the following year	656	652
Payments in subsequent years	962	1 647
Total leasing liabilities	1 618	2 298
<hr/>		
Other contingent liabilities		
Guarantee according to Nuclear Energy Act	44 290	77 227
As security for own liabilities	15	31
Total other contingent liabilities	44 305	77 258

According to the Finnish Nuclear Energy Act, Teollisuuden Voima, a joint venture of which Pohjolan Voima owns 57.06%, 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 44.2 million Euros (2018: 77.2 million Euros).

19 DERIVATIVE FINANCIAL INSTRUMENTS

1 000 €	2019	2018
Interest rate swap contracts		
Nominal value	394 000	424 000
Market value (including retained interests)	-4 080	-2 684
Average maturity (years)	4,1	4,6
Floating reference rate (company receives)	Euribor 6 mo/	Euribor 6 mo/ Euribor 3 mo/ Euribor 1 mth./
Fixed rate (on average, company pays)	0,17%	0,150%
The interest rate swap contracts cover the following financial agreements with floating interest rates:		
Bank credit	210 000	410 000
Amounts owed to participating interests	195 433	195 859

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 31.12.2019. 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.

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 € 6 687 528,00.

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, February 27, 2020

Tapio Korpeinen

Chairman

Seppo Parvi

Deputy Chairman

Esa Kaikkonen

Jukka Hakkila

Anders Renvall

Tapani Sointu

Rami Vuola

Mikko Rintamäki

Mikael Surakka

Ilkka Tykkyläinen

President and CEO

The Auditor's note

Our auditor's report has been issued today.

Helsinki, March 10, 2020

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 position and financial performance and cash flows 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.

Our opinion is consistent with the additional report to the Audit Committee.

What we have audited

We have audited the financial statements of Pohjolan Voima Oyj (business identity code 0210161-4) for the year ended 31 December 2019. 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, statement of cash flows 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.

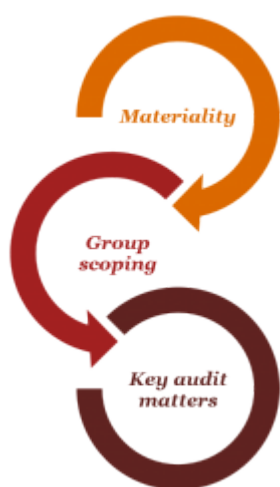
Independence

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.

To the best of our knowledge and belief, the non-audit services that we have provided to the parent company and to the group companies are in accordance with the applicable law and regulations in Finland and we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014. The non-audit services that we have provided are disclosed in note 12 to the Financial Statements.

Our Audit Approach

Overview



Overall group materiality:

- € 10 million, which represents 0,5% of balance sheet total

Group audit scope:

- The group audit scope encompassed all group companies

Key audit matters:

- Valuations of joint venture Teollisuuden Voima Oyj in consolidated financial statements
- Intangible assets with indefinite useful lives

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial statements as a whole.

Overall group materiality

€ 10 million

How we determined it

0.5% of balance sheet total

Rationale for the materiality benchmark applied

We chose balance sheet total as the benchmark because the company's operations are very capital intensive and because, in our view, this is the benchmark against which the performance of the group is commonly measured by users.

How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the group, the accounting processes and controls, and the industry in which the group operates.

Group audit scope: We audited the consolidated financial statements and the financial statements of the parent company and all its' subsidiaries.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
<p><i>Valuations of joint venture Teollisuuden Voima Oyj in consolidated financial statements</i></p> <p><i>Refer to the notes 1 Notes to the financial statements, 2 Critical judgements in applying the entity's accounting policies and critical estimations and assumptions, 14 Share of loss/profit of associates and joint ventures, 20 Investments in associates and joint ventures, 22 Loans and other receivables and 31 Financial assets and liabilities by category and fair value hierarchy.</i></p> <p>On balance sheet investments in joint ventures consist of group's share of Teollisuuden Voima Oyj's net assets. Investments in joint ventures are accounted for using the equity method.</p> <p>Loans and other receivables include an equity loan receivable from Teollisuuden Voima Oyj. Teollisuuden Voima Oyj has a OL3 power plant under construction. Delivery of the plant has been significantly delayed from the original schedule.</p> <p>Valuations of joint venture Teollisuuden Voima Oyj in consolidated financial statements is a key audit matter in our audit due to the significant value in the balance sheet and due to OL3 power plant under construction.</p>	<p>We tested the consolidation of the joint venture in Pohjolan Voima Group's income statement and balance sheet.</p> <p>We analysed management's assessment of the credit risk relating to the equity loan receivable from Teollisuuden Voima Oyj.</p> <p>We reviewed management's risk assessment regarding monitoring of progress of the OL3 project.</p> <p>In our audit of the amount capitalised in the balance sheet we considered the provisions regarding shareholder responsibilities incorporated in the Articles of Association.</p> <p>We also assessed the adequacy of related disclosures in the accounting policies and notes to the financial statements.</p>

Intangible assets with indefinite useful lives

Refer to the notes 1 Notes to the financial statements, 2 Critical judgements in applying the entity's accounting policies and critical estimations and assumptions and 17 Intangible assets.

Intangible assets with indefinite useful lives include the right to produce hydro power and the compensation paid for the permanent right of the water area usage.

Impairment testing for intangible assets with indefinite useful lives is performed annually.

Impairment tests, in particularly estimated future cash flows and discount rates are subject to significant management judgement.

Valuation of intangible assets with indefinite useful lives is a key audit matter in our audit due to the significant value in the balance sheet and the high level of management judgement involved in impairment tests.

We have no key audit matters to report with respect to our audit of the parent company financial statements.

There are no significant risks of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014 with respect to the consolidated financial statements or the parent company financial statements.

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

Appointment

Pohjolan Voima Oyj became a public interest entity in May 2019. We have been the auditors of Pohjolan Voima Oyj all that time it has been a public interest entity.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included 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 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
- 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 Statements

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

Helsinki 10 March 2020

PricewaterhouseCoopers Oy

Authorised Public Accountants

Jouko Malinen

Authorised Public Accountant (KHT)