Vattenfall N.V. Annual Report 2019

Fossil-free within one generation

VATTENFALL

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Report of the Management Board

About Vattenfall NV

Vattenfall AB is one of Europe's largest producers and retailers of electricity and heat. Vattenfall's main markets are Sweden, Germany, the Netherlands, Denmark, and the UK. The Group has approximately 20,000 employees. The Parent Company, Vattenfall AB, is 100% owned by the Swedish state, and its headquarters are located in Solna, Sweden. Vattenfall is organised in six cross-border Business Areas: Heat, Wind, Customers & Solutions, Generation, Markets and Distribution. In the Netherlands Vattenfall is mainly active in the Business Areas: Heat, Wind and Customers & Solutions.

In 2018 it was decided that all main activities of Vattenfall will be executed under one brand. As part of that decision a rebranding strategy for Nuon was started. In 2019, the Nuon brand was migrated from Nuon to Vattenfall. As part of this rebranding strategy, the legal name of N.V. Nuon Energy ('Nuon') was changed to Vattenfall N.V. ('Vattenfall NV') on 5 March 2019.

Vattenfall's operations in the Netherlands are carried out by Vattenfall NV and its subsidiaries. Vattenfall NV also operates one gas storage facility located in Germany. Vattenfall NV produces and supplies electricity, gas, heat and cooling, offering its customers a wide range of energy-saving products and services. Vattenfall NV has approximately 3,600 employees (FTEs) and more than 2 million customers in the Netherlands. With net sales reaching EUR 2.8 billion in 2019, Vattenfall NV holds a top-three position in the Dutch energy market. The activities relating to market access, trading and power plant optimisation are centralised in one central Continental hub in Hamburg. The activities that serve and support Vattenfall NV's power plants and gas portfolio optimisation are also handled in Hamburg, but are executed on behalf of Vattenfall NV.

In March 2019 Vattenfall acquired DELTA Energie B.V., strengthening Vattenfall's position in the Netherlands with its green profile and a strong loyal customer base. As a result, the activities are consolidated in Vattenfall NV as of March 2019.

With the acquisition of Dutch energy services company Senfal B.V., new services have been added for large industrial customers with the aim of unlocking value through flexibility and optimisation of renewable generation. Through its services, Senfal is able to substantially reduce the energy bill for large industrial companies and realise substantial improvements in power trading profits for wind and solar farms as well as battery owners.

Vattenfall AB has committed itself to the Swedish Corporate Governance Code (SCGC). Within the Vattenfall Group focus on the SCGC is therefore emphasised. More information about Vattenfall can be found in the 2019 Annual and sustainability report of Vattenfall AB and can be found at www.vattenfall.com. As part of Vattenfall, Vattenfall NV's financial and sustainability results are included in this Vattenfall report. More detailed information about Vattenfall's work with sustainability is also available at https://group.vattenfall.com/who-we-are/sustainability.

Our beliefs about the future

As part of Vattenfall, we are determined to enable fossil-free living within one generation. To succeed we must become fossil-free ourselves. But that is not enough. We are looking beyond our own industry to see where we can really make a difference. Together with our partners, we are taking on the responsibility to find new and sustainable ways to electrify transportation, industries and heating. Vattenfall NV is passionate to contribute to this transformation of the energy sector and drive the development to reduce our dependence on fossil fuels. Our beliefs underpin our strategy and represent our view of what is necessary to ensure Vattenfall's success given the overall context in which we operate.

Sustainability is the business - and a prerequisite for access to customers, competence and investors
Customers want to reduce their carbon footprint and seek to do so by engaging with companies with similar values of environmental and social responsibility. Employees are driven more than ever to seek companies with strong values where they feel they can have a positive impact on society. Likewise, investors are increasingly integrating sustainability into their decision-making and moving away from investments that link them to fossil fuels. Businesses viewed as forward-thinking and sustainable will be able to leverage stakeholder expectations to their benefit, gaining an edge in the competition for talent, easier access to capital, and more opportunities to form strategic partnerships.

To best serve the needs of customers, a total energy perspective is necessary
Customers are becoming increasingly sophisticated as they progressively adopt decentralised solutions like heat

pumps, solar power, e-mobility, energy storage, and smart devices. However, customers are not always equipped to optimise the interplay between the various technologies and thus seek simple, integrated solutions that do not require them to be experts. Companies that can provide simple solutions that truly focus on customer needs by effectively leveraging their expertise across the full energy value chain will have a strong competitive advantage.

Electrification is a key enabler of fossil-free living and, given the pace required, demand for fossil-free electricity and distribution infrastructure will increase significantly
Electrification represents an opportunity to reduce carbon emissions in the transportation, heating and industrial sectors. The key driver for electrification is a combination of cost efficiency and sustainability, and demand for low-cost, fossil-free electricity will increase as a result. This will also place additional demand on electricity networks, creating the need for further investments in expansion and modernisation of networks. Suppliers of fossil-free electricity and heat, as well as the respective network operators, will play an increasingly important role in the work to combat climate change.

Digitalisation of the entire energy value chain is required to leverage flexibility and serve customers in a fossil-free, robust and cost-efficient energy system
As renewable resources increase and industries electrify, it is necessary to better leverage existing infrastructure and the potential for flexibility in order to continue to create a fossil-free, robust and cost-efficient energy system. In addition, customers expect instant information and access as smartphone applications and internet-based solutions are the main interface for customer service and interaction. This means that further digitalisation of the energy value chain is needed, including the ability to gather and make sense of large amounts of real-time data to forecast demand, to perform predictive maintenance and remotely steer devices, along with sound data management practices and smooth customer interfaces.

New competences, speed in learning and diverse and inclusive teams are critical in the energy transition
New skill sets and competences will constantly be required as our industry transitions into new ways of interacting with customers, technology and society. Speed in learning and the ability to adapt to new ways of working will be important competitive advantages and enable the delivery of new products and more efficient processes. Company cultures that are inclusive to diverse points of view will be critical to foster this learning environment and attract and retain talent.

Cost efficiency and competitiveness are prerequisites for value creation and growth
Increased competition in both core and new businesses puts pressure on margins, necessitating a focus on both cost efficiency and competitiveness in order to deliver value. Improving efficiency throughout the value chain will play a significant role. Efficient operations require high utilisation of people and assets, lean and digital processes and high cost awareness.

Changing regulatory framework

Political pressure to align the regulatory framework with the needed changes to become fossil free and comply to the Paris agreement have been intensified in 2019. This happened both on a national and on a European scale. The following summarises key regulatory trends at EU scale and nationally.

Climate Act and Dutch Climate Agreement - In 2019, a legally binding Climate Act, with focus on carbon-neutral power production by 2050 was established. In addition, a non-binding societal Climate Agreement, with a 2030 greenhouse gas reduction target of 49% compared to 1990, was concluded. These agreements should result in a total of more than 84 TWh renewable power production, 2 million zero-emission passenger cars, and 1.5 million households switching from natural gas to sustainable energy sources for heating and cooking. Electrification of industry, including carbon capture and storage (CCS), will be incentivised via subsidies and a national CO_2 tax. By 2030, hydrogen technology should be built out as an important energy carrier in several sectors. Vattenfall has committed itself to contribute to the goal of the Climate Agreement and to the implementation of relevant agreements and actions.

National ban on coal for power production -
The utilisation of hard coal for power production is prohibited as per 1 January 2020, which led to the closing of Vattenfall's only coal-fired power plant in the Netherlands, Hemweg 8, in December 2019. The four remaining coal-fired power plants in the Netherlands are given a transition period until 1 January 2030, at the latest.

National minimum CO_2 price for power production - As per 1 January 2020, a national minimum CO_2 price is introduced for power production. power production. The price path (2020-2030) is currently below the prognosed EU ETS price. The national minimum CO_2 price could however have impact on the profitability of our gas-fired plants in the future. On the other hand, the minimum price provides some additional certainty for financing of sustainable projects.

Gas production from the Groningen field to stop by the end of 2022 - The government decided to stop gas production from the Groningen field in 2022, instead of 2030, providing a push for the development of fossil-free heating. The use of natural gas from other fields will still be possible and allowed.

Urgenda verdict holds at Supreme Court - The original ruling of the verdict of The Hague District Court in 2015 remained unaffected at the supreme court. This means that there is no escape anymore for the Dutch government, but to do anything they can to reduce the Dutch CO_2 emissions by 25% in 2020. Given the delay in following the original verdict, this is expected to become a very difficult if not almost impossible task. Following the Urgenda verdict, the Dutch government seeks for new ways to reduce Dutch CO_2 emissions. It is expected to be very difficult to implement measures that can realistically close the multi-megaton gap that is still in place. It is expected to be too late and very costly to close down all remaining coal-fired plants and by changing coal for subsidised biomass we are facing both public and political opposition.

Nitrogen reduction ordered by Court - The Dutch Council of State ordered the government to reduce the emissions of nitrogen. The existing regulation violates EU law and should therefore be adapted. There is no easy or quick fix. Some proposed measures include reduction of the maximum speed on highways, dietary change for cattle and a voluntary arrangement for farmers to reduce their scale/stop. We are monitoring our construction sites with regards to this regulation.

European Commission presents New Green Deal - In December 2019, the European Commission published its European Green Deal communication, laying out the more than 50 legislative and non-legislative initiatives, with many of key importance for Vattenfall business, that will come out in the coming 2 years. The implementation of the Green Deal offers a unique opportunity for Vattenfall to contribute to shaping the future of the EU and thereby our market environment. Moreover, if the ambition is strong enough and various initiatives are designed in the right direction, it can be an accelerator for Vattenfall in reaching its own goals. Vattenfall selected 17 files that are crucial to our business and will work on positioning and outreach on all 17, together with the business.

Strategy

Vattenfall has formulated a strategy with the purpose to Power Climate Smarter Living and enable fossil-free living within one generation. This commitment to our customers, stakeholders and employees provides clear direction, engagement and focus as well as significant business opportunities. This strategy is fully implemented into Vattenfall NV's operations. The Vattenfall strategy is summarised below to the extent to which it is relevant for Vattenfall NV's activities. For further context and details, we refer to Vattenfall's annual and sustainability report.

Fossil-free living within one generation remains our compass

Fossil-free living within one generation continues to be a powerful and relevant message that provides a clear direction for Vattenfall. This bold statement also sets us apart as leaders in the energy transition, and it is increasingly clear that customers as well as potential employees and investors are responding to this. With the successful rebranding of Nuon to Vattenfall and the introduction of our purpose Power Climate Smarter Living and our goal of enabling fossil-free living within one generation to the general public, we see among the general public a gradual increase in the value of our brand.

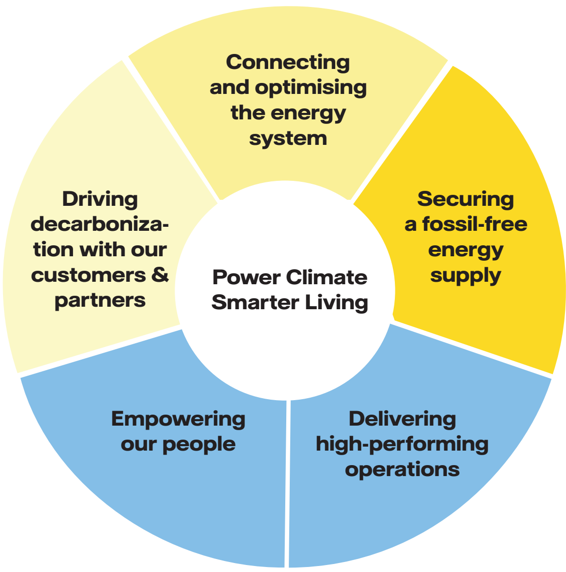
While the goal is clear, the path to get there is still being uncovered, and we know it will not be an easy road. It starts with the phase-out of coal, but regulatory uncertainty remains on how this will occur leading up to the prescribed end dates, as well as which technologies are viable replacements. Similarly, we know natural gas will be phased out next, though there is even greater uncertainty around the timing and replacement technologies. Meanwhile, growth of

Vattenfall's strategy drives our contribution to the UN Sustainable Development Goals

Our strategy and our purpose reflect the UN's Agenda 2030, in particular the Sustainable Development Goals for Affordable and clean energy (#7), Industry, innovation and infrastructure (#9), Sustainable cities and communities (#11), Responsible consumption and production (#12), Climate action (#13), and Partnerships for the goals (#17).

renewables and the proliferation of new and decentralised energy solutions are accompanied by investment challenges and risk exposures which require new business models and competences to properly manage. As we adapt our plan to the evolving landscape, transparency with our stakeholders will ensure that we remain a trusted partner and a leader in the transition.

In 2015 the Board of Directors decided on Vattenfall's four strategic objectives which have since guided our strategic direction. Though our strategy remains directionally the same, we have updated our strategy wheel to better show how we are creating traction given the context we operate in, and how we are capturing business opportunities to support our purpose to Power Climate Smarter Living and our goal of enabling fossil-free living within one generation. We have introduced a new focus area to reflect the importance of a connected and optimised energy system to achieving this goal.



- **Driving decarbonisation with our customers & partners** with focus on increasing customer centricity and promoting electrification and climate smart energy solutions in areas where we have a competitive advantage. (Formerly: Leading towards sustainable consumption)
- **Connecting and optimising the energy system** with focus on maximising the value of flexibility and promoting a stable and cost-efficient grid infrastructure (New)
- **Securing a fossil-free energy supply** with focus on growing in renewables, maximising the value of our existing fossil free assets, and implementing our CO_2 roadmap. (Formerly: Leading towards sustainable production)
- **Delivering high-performing operations** with focus on being both competitive and cost-effective, leveraging opportunities in digitalisation and taking social and environmental responsibility throughout the value chain. (Formerly: High-performing operations)
- **Empowering our people** with focus on securing necessary competence while improving the employee journey and providing a safe working environment. (Formerly: Empowered and engaged people)

Achieving our strategic objectives will require that we accelerate our work in a number of important areas. Maintaining a competitive edge and financial strength are key prerequisites in this work. We will need to meet customers' needs faster, increase our efficiency ambitions, and raise the bar with respect to sustainability.

In 2019 we introduced Vattenfall, Incharge eMobility and our purpose to the general public in the Netherlands. We acquired DELTA Energie with its green profile and a strong loyal customer base. By winning the tender of Hollandse Kust Zuid 3 &4, the start of the first physical preparatory work for Hollandse Kust 1&2, the construction of Windpark Wieringermeer, development of several solar parks and last but not least by closing the Hemweg 8 coal-fired plant we made important steps in realising our strategy to power climate smarter living.

Operational Performance

A sustainable Investment plan

Vattenfall continues to invest heavily in growth with a clear focus on additional renewable production accompanied by measures to decarbonise the heat business and strengthen supply networks for electricity and heat. Total planned investments in 2020 and 2021 are SEK 58 billion (EUR 5.5 billion), with growth investments accounting for nearly 62% (EUR 3.4 billion). The investment strategy reflects Vattenfall's goal to enable fossil-free living within one generation.

Around SEK 13 billion (EUR 1.3 billion) of the growth investments are planned for investments in the Netherlands. The plan includes expenditures for major offshore projects that are planned to be completed further ahead in time, like Hollandse Kust Zuid 1-4 (1,500 MW). Main onshore projects are Wieringermeer (180 MW), Wieringermeer Extension (118 MW) and Windplan Blauw (58 MW). Vattenfall is also investing in solar and battery projects, including a major - renewable energy park in Haringvliet, combining onshore wind (22 MW), large-scale solar (38 MW) and battery storage (12 MW). For large-scale solar projects, a develop-to-sell business model is applied, which means that most of the projects are divested after construction.

In addition, investments will be made in new energy solutions, heat supply, decentralised heat solutions and e-mobility. For the heat operations this includes major projects like the Amsterdam South Connection, enabling considerable growth in district heating, and Green Heat Diemen, a new wood pellet-fired heat only boiler with a capacity of 120 MWth located southeast of Amsterdam. Besides these growth activities, Vattenfall is planning significant investments in maintenance and replacement of the existing assets.

Customers and Solutions

Vattenfall's Customers & Solutions business supplies electricity, gas and energy solutions to retail and business customers, with 10.2 million customer contracts in Europe. We are one of the market leaders in the retail and business segments in the Netherlands (3.6 million electricity and gas contracts). We offer a broad range of decentralised solutions in most of our markets and are one of the largest energy solution providers in the Netherlands through our subsidiary Feenstra, with 860,000 customer contracts.

Our ambition is to be a leading customer-centric company, supplying a wide range of sustainable energy solutions and services to retail and business customers. We help our customers to live a climate-smart life and contribute to their safety and comfort. We offer sustainable and efficient products and services based on customers' individual energy needs. Our focus is on areas like smart, data-based solutions, decentralised generation (in particular solar (PV) and heat pumps) and new customer interaction models with the aim to achieve significant market size. We are striving to optimise the customer experience by accelerating digitalisation and offering bundled, integrated and climate-smarter solutions. We are increasing the profitability of our commodity sales business by retaining and growing our customer base while reducing the cost to serve.

Our retail customer base grew by 0.2 million contracts during the year in the Netherlands, including the customers from the Dutch regional supplier DELTA Energie which we acquired in March 2019. DELTA Energie supplies renewable electricity and gas to private customers and small and medium-sized companies, primarily in the Zeeland province of the Netherlands. DELTA Energie has approximately 120 employees and 170,000 customers.

We improved our absolute Net Promoter Score (NPS) during the year and stayed ahead of our average peer competitors as evidenced by our relative NPS of +1. We changed our brand name in the Netherlands from Nuon to Vattenfall with good response and reasonably limited impact on churn and commercial results given the magnitude of this change. Powerpeers, our previously separately branded peer-to-peer platform for sharing renewable energy in the Netherlands, is being integrated into Vattenfall to offer this service to all of our Dutch retail customers.

At Vattenfall NV, we also take our responsibility when it comes to the affordability of energy. We do this in our own billing process and by working together with municipalities on early signalling and other creditors within the creditors' coalition. We offer customers various options, such as choosing your own payment date and payment arrangements, to prevent increasing debts. The initiative 'Nuon Verlicht' helps customers under judicial administration and we offer these customers a free energy scan to reduce their energy consumption and thus lowering their energy bill.

We increased our sales of e-mobility solutions in the Netherlands. We now operate more than 9,000 charging

points, making the transition to sustainable, electrified transport easier. In the Netherlands, Vattenfall owns and operates almost 20% of the public charging stations but offers its customers access to around 95% of all charging stations in the country through roaming agreements. In addition, together with our partners we are building InCharge to be one of the biggest charging networks in Northern Europe.
We have won the tender for public charging of electric cars in Amsterdam. Here we are operating more than 3,500 stations of which around 900 are included in our so-called Flexpower project. The Flexpower project is a smart charging solution, which is launched in 2019, that steers the charging stations based on daily load curves from the grid operator and forecasts for local neighbourhood solar panel production. On the consumer side, a pilot project is ongoing in Amsterdam, where we have installed private home chargers that are controlled by Vattenfall's trading business so that the customer's EV is charged when prices are the lowest.

We have acquired a Dutch energy services company called Senfal. The acquisition will add new services for our large industrial customers with the aim of unlocking value through flexibility and optimisation of renewable generation. Through its services, Senfal is able to substantially reduce the energy bill for large industrial companies and realise substantial improvements in power trading profits for wind and solar farms as well as battery owners.

Wind

Vattenfall continues to be a leading player in the offshore wind power industry as well as one of the leading companies in onshore wind power in Europe, especially in Denmark and the Netherlands. We operate a portfolio of about 200 wind turbines with a total installed capacity of approximately 0.4 GW in the Netherlands. In 2019 we continued our focus on solar power (PV) technology and battery storage. We now operate 20 MW of solar power comprising a combination of decentralised and large-scale projects and have installed 3 MW of battery capacity in the Netherlands. Total renewable production, including direct purchasing from third parties, increased by 12% from 1.2 TWh to 1.3 TWh.

We want to be a leader in the renewables transition through construction and operation of onshore and offshore wind power and to achieve a leading position in solar power in the near future, by further strengthen the project pipeline, to be a leader in Levelised Energy Cost (LEC), to innovate within operations and maintenance and keep focus on the digitalisation of our entire value chain, to use the potential of combining solar, wind and battery technology for renewable hybrid power plants and to a greater extent decouple the delivery of electricity from the time of production.
In addition to the already won tender for the Hollandse Kust Zuid 1 & 2 offshore wind farm, Vattenfall also won the second phase of the Dutch offshore wind farm Hollandse Kust Zuid 3 & 4. Together, the wind farms will have a capacity of approximately 1.5 GW, which corresponds to the annual electricity consumption of up to 3 million Dutch households, and will become the two first non-subsidised offshore wind farms in the world, when commissioned. This is proof that our continuous efforts to reduce costs along our entire value chain are working successfully. The wind farms will contribute significantly to Vattenfall's goal of enabling fossil-free living within one generation.

In early 2019, the original 17 turbines of the Dutch Slufterdam onshore wind farm were replaced by 14 more efficient ones. As a result, the power output doubled from 25 MW to 50 MW, of which 29 MW belongs to Vattenfall. About 60 km north of Amsterdam, Vattenfall is repowering and expanding the Wieringermeer onshore wind farm up to a total combined capacity of 298 MW.

Next to our wind activities, a number of solar power and battery projects were developed during the year. Vattenfall has finalised the installation of solar panels at existing power plants in Velsen, Eemshaven and Hemweg in the Netherlands with a total capacity of 10 MW. Additionally, Vattenfall is building a new hybrid energy park, consisting of solar panels, wind turbines, and batteries at Haringvliet in the Netherlands. By 2020, Haringvliet South will consist of a total of 124,000 solar panels (38 MW), six wind turbines (22 MW) and 12 shipping containers of batteries manufactured by BMW (12 MWh).

With Vattenfall's ambition to enable fossil-free living within one generation, the hybrid renewable energy park can play a huge part in that ambition as wind, solar and batteries have many synergies if we develop them together, sharing infrastructure and having a stable and reliable production throughout the year.

In addition, we have significantly grown our renewable PPA business. Vattenfall signed a 15-year purchase agreement for renewable electricity from a Zeewolde onshore wind farm in the Netherlands. Vattenfall will purchase power from 83 of the turbines, in total approximately 300 MW, making this Vattenfall's largest PPA to date in the Netherlands.

Heat

The Heat operating segment comprises Vattenfall's heating and condensing businesses and Vattenfall is present in four of the top ten largest markets in Europe. Our core business is district heating, where we have 1.8 million customers in large metropolitan areas like Berlin, Amsterdam and Uppsala, serving the residential and commercial property markets (B2B business). In addition, we have a decentralised heat/energy business with 75,000 customers with significant growth potential in Sweden, Germany, the Netherlands and the UK. Vattenfall's Heat business focuses on solid cash flows, health and safety for all operations including service companies and high reliability of generation and supply.

Our strategy is to be a leader in decarbonisation and the management of heat solutions and customer-centric energy solutions. We are decarbonising our production portfolio in the cities where we are active, with the aim to replace all natural gas by 2050, at the latest. This will require active system management and the Heat business will position itself as a system manager that integrates a mix of own and external heat sources while minimising individual customers' energy consumption with the help of state-of-the-art digital tools. We focus on profitable growth of our district heating operations. Going forward, we will become even more customer-centric and develop our product/service offering beyond district heating. We will offer fossil-free, simple and smart comfort with focus on energy efficiency and integrated energy solutions (heating, cooling, e-mobility, local electricity generation and digital solutions that minimise energy consumption).

The total produced electricity amounts to 19.0 TWh in 2019 (15.9) by our gas and coal-fired plant in the Netherlands. The increase in production was mainly related to improved spreads on our gas-fired plants and higher availability. The number of heating customers increased further from 120 thousand in 2018 to 123 thousand in 2019. Total sold heat amounted to 6.2 PJ in 2019 (6.2) and total realised CO_2 reduction over 2019 was around 254,000 ton CO_2.

In Amsterdam, the development of the biomass at our Diemen gas-fired CHP plant is ongoing. The permit application has been submitted, the engineering has been executed and invitation for tenders have been sent out. In addition, the activities to connect the two different district heating networks in Amsterdam has been started. This connection should enable the further growth of the district heating network in Amsterdam, reducing CO_2 by 75,000 ton. There are also projects planned to integrate geothermal heat and excess heat from data centres in the district heating network in Amsterdam. The development of the Almere Pipeline project in the Netherlands to integrate third party biomass is in progress.

The coal-fired power plant Hemweg 8 in the Netherlands closed at the end of 2019. The plant site is under development to a facility where fossil-free electricity and heat can be produced for Vattenfall's customers.

Our people

Vattenfall offers a wide array of job opportunities with continuous learning possibilities. All employees in our company are given the opportunity to support the energy transition to fossil-free living within one generation. We want every individual to bring their unique talents and competences and be their authentic selves at work. In this way we form a diverse environment, with the right conditions for employees to make a difference in enabling climate-smart living.

We strive to enable our people to unlock their unique potential here at Vattenfall, stay engaged and high-performing in a work environment with a special mix of professionalism and informality that is healthy, safe, supporting and inclusive. Our ambition for a fossil-free future is a foundation for meaningful work and opportunities for individual growth and learning across the entire energy value chain in a variety of roles, businesses and regions. We are working actively to provide a safe and healthy work environment, to enable an engaging, high-performance culture and to secure the right and diverse competences.

Our goal is to have zero accidents and zero work-related sickness. The focus of our health and safety (H&S) strategy is to enable employees to perform in an inspiring and caring culture, free from any harm to mind or body. Our policy clearly states that work shall stop if employees or contractors are in danger. In 2019, Vattenfall has implemented the Hearts and Minds approach, an international best practice, to address the root cause of accidents. Despite all efforts, the Lost Time Injury Frequency (LTIF) increased to 2.1 in 2019 from 1.9 in 2018 for Vattenfall. There is no single cause for the increase in accidents, though the most common root cause is culture and awareness. To counter this, we will continue to work relentlessly to improve the H&S culture, H&S maturity level, and have a high focus from the entire organisation, including top management. We trust that these measures will be reflected in a reduction of the LTIF in 2020. The LTIF decreased from 2.4 in 2018 to 2.0 in 2019 in the Netherlands. Given that organisational and social health aspects are playing an increasingly important role in the well-being of employees, a variety of initiatives such as workshops and podcasts relating to stress, work-life balance and workload have been initiated. In addition, specific activities are organised on a local level, such as briefings, workshops and surveys related to health and harassment. The positive impact from our efforts is reflected in the sick leave rate, which has decreased from 4.0% in 2018 to 3.7% in 2019 for Vattenfall. The sick leave rate for the Netherlands is stable at 4.4% (excl. Feenstra).

In 2017, we set out on a journey to transform our culture towards being more open, active and positive in a work environment committed to safety. Since then, we have stepwise launched our activation programme aiming to strengthen employee engagement by driving change in the company culture. The programme helps all our people to

understand our purpose and our goal, how to get there and why we need to change, just as it puts everyone's personal contribution into this context. In 2019, we re-defined the leadership behaviour necessary to deliver on our purpose and drive the desired company culture. We expect our managers to Accelerate Learning, Connect People, and Drive Innovation.
The number of employees decreased to 19,814 full-time equivalents (FTEs) from 19,910 FTEs in 2018 for Vattenfall. In the Netherlands, the number of employees increased from 3,418 FTEs in 2018 to 3,558 FTEs in 2019, of which 895 are female and 2,663 male. As the speed of progress on the climate issues needs to increase during the years to come, so does our speed in learning and the ability to adapt to new ways of working. This is why we have given even more attention to securing the availability of competences in the long term.

In 2019, we focused on further launching our Employer Brand to attract sought-after competences within technology and maintenance, using different methods and channels to find and attract people with the right skills and attitude. We also launched our new career website. Vattenfall also runs and participates in various programmes and initiatives that support broad aspects of diversity and inclusion. We believe this strengthens us as an employer and enables us to better understand our customers' expectations and makes us a better partner in the communities we serve.

Integrity

Operating our business with integrity is essential for ensuring that we live up to our stakeholders' expectations. They depend on us to conduct our business in a fair and responsible manner. We have a zero tolerance policy for bribery and corruption, and we are a member of the Partnering Against Corruption Initiative (PACI), a cross-industry collaboration launched by the World Economic Forum, as well as of Transparency International Sweden. We require that all employees take personal responsibility to act in accordance with the company's ethical guidelines, which are laid out in the Vattenfall Code of Conduct and Integrity. Tailor-made face-to-face training programmes and e-learning tools support these ambitions. We expect our suppliers and business partners to act ethically and in full compliance with the applicable rules in every country they do business, as outlined in the Vattenfall Code of Conduct for Suppliers. Read more about Vattenfall's integrity organisation in the Corporate Governance Report in the annual report of Vattenfall AB.

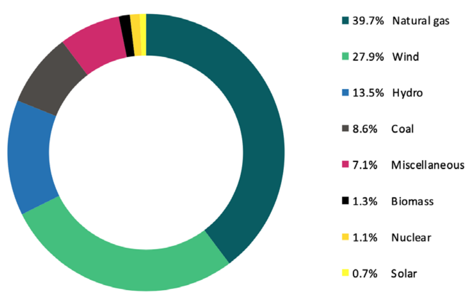
The Vattenfall Code of Conduct and Integrity applies worldwide to all employees as well as temporary staff (such as consultants and contractors) acting on behalf of Vattenfall. It describes the behaviour we expect of all representatives of Vattenfall. All managers in the Executive Group Management of Vattenfall AB and three levels below, as well as all employees who have extensive contact with competitors, are required to participate in the Vattenfall Integrity Programme (VIP). It is the responsibility of every manager to lead by example and to ensure their team members understand our way of working. All suspected incidents are to be reported to the employee's immediate manager, to the integrity organisation or to the Internal Audit department. Additionally, we have a Group-wide whistleblowing function with locally appointed external ombudsmen (attorneys) to whom employees, consultants and suppliers can anonymously report suspected improprieties. If, despite all efforts to prevent non-compliance, non-compliance is determined, mitigating actions are defined and followed-up on. All incident investigations are led by Vattenfall's Internal Audit unit. We have conducted and will continue to conduct risk assessments related to integrity.

Our integrity work is not just an internal issue – we also have corresponding requirements for our suppliers. We require our suppliers to comply with the Vattenfall Code of Conduct for Suppliers, or an equivalent standard agreed together with us. In the integrity area, the Code of Conduct for Suppliers puts special emphasis on business integrity, anti-corruption, conflicts of interest and competition law, as well as information on how to use the whistleblowing function. It is based on, among other things, the UN Global Compact, the UN Guiding Principles for Business and Human Rights, ILO declarations and the OECD Guidelines for Multinational Enterprises.

Fuel Mix supply

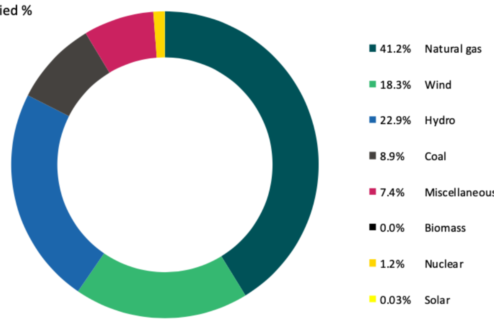
All electricity suppliers in the EU are required by law to publish the fuel mix of the electricity they supply to customers. Our supply mix is shown in the figures below, which illustrates that share of renewable electricity increased by 6.1% from 37.3% in 2018 to 43.4% in 2019. The share of renewable electricity represents the number of Guarantees of Origin (GoO) used for green electricity supplied to end-customers. The supply mix also shows that a large part of the energy supply in the Netherlands is sourced from natural gas.

Fuel mix energy supply Vattenfall NV Group
RA-verified %



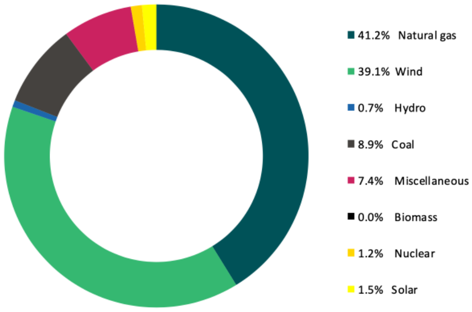
Fossil-based energy	56.6%
Renewable energy	43.4%
CO2 emissions rate	284.1 g/kWh
Radioactive waste rate	0.00003 g/kWh

Fuel mix energy supply business market
RA-verified %



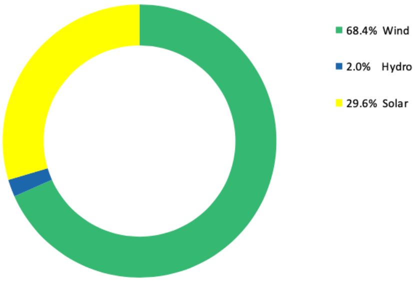
Fossil-based energy	58.7%
Renewable energy	41.3%
CO2 emissions rate	294.7 g/kWh
Radioactive waste rate	0.00004 g/kWh

Fuel mix energy supply consumer market
RA-verified %



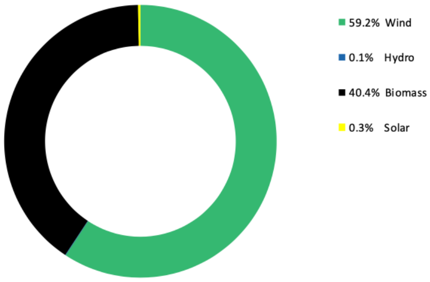
Fossil-based energy	58.7%
Renewable energy	41.3%
CO2 emissions rate	294.6 g/kWh
Radioactive waste rate	0.00004 g/kWh

Fuel mix energy supply PowerPeers
RA-verified %



Fossil-based energy	0.0%
Renewable energy	100.0%
CO2 emissions rate	0.0 g/kWh
Radioactive waste rate	0.00000 g/kWh

Fuel mix energy supply Delta Energie
RA-verified %

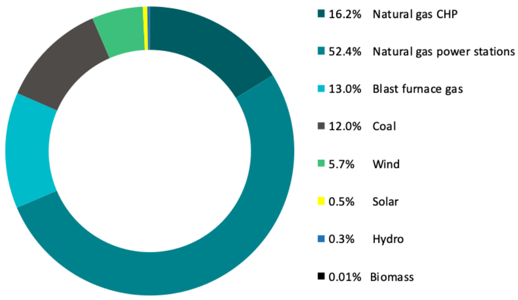


Fossil-based energy	0.0%
Renewable energy	100.0%
CO2 emissions rate	0.0 g/kWh
Radioactive waste rate	0.00000 g/kWh

Production fuel mix

CO_2 emissions decreased from 494 to 469 grams per kWh. The total production of renewables increased by 0.5 TJ. The relative share of renewable energy however decreased from 6.9% in 2018 to 6.5% in 2019, due to very good spreads and availability of our gas plants. The share of coal-fired power plants is lower compared to 2018, mainly due to lower spreads on our coal plant in 2019.

Vattenfall fuel mix energy production in the Netherlands
RA-verified %



Fossil-based energy	93.51%
Renewable energy	6.49%
CO2 emission rate	468.5 g/kWh
Radioactive waste rate	0.00000 g/kWh

1. At our power plants in Velsen, the residual gas released during the steel production of Tata Steel is used as a fuel to produce electricity. In this way this blast furnace gas is put to good use by Vattenfall NV. The gas contains a high percentage of CO_2. It has been agreed with the Office of Energy Regulation of the Dutch Competition Authority that Vattenfall NV is to adjust the CO_2 emissions in the production fuel mix to avoid double counting. The CO_2 emission factor of blast furnace gas is calculated in this mix on the basis of the use of natural gas.
2. The wind energy production means all electricity that Vattenfall NV, as producer and beneficial owner, feeds into the electricity grid via grid connection points.

Financial Performance

Income statement

The table below shows the results for 2019 compared to 2018.

Amounts in EUR million, 1 January-31 December	2019	2018
Net sales	2,832	2,619
Cost of purchases	-2,271	-1,468
Gross margin	**561**	**1,151**
Other external expenses	-376	-432
Personnel expenses	-296	-281
Other operating incomes and expenses, net	81	45
Participations in the results of associated companies	2	-1
Operating profit before depreciation, amortisation and impairment losses (EBITDA)	**-28**	**482**
Depreciation, amortisation and impairments	-272	-181
Operating profit (EBIT)	**-300**	**301**

Net sales

Net sales increased by 8.1% to EUR 2,832 million in 2019. The average electricity and gas prices were higher in 2019 compared to 2018, affecting both the Net sales and the related Cost of purchases. In addition Net sales increased, due to the acquisition of DELTA Energie.

Gross margin

In 2019, the gross margin decreased by 51% to EUR 561 million, which is mainly due to EUR 458 million (2018: gain EUR 58 million) unrealised fair values losses on own-use power and gas forward contracts. The fair value loss is the result of decreasing forward prices, mainly caused by the mild winter of 2018/2019, falling gas production cost and increased electricity generation by renewables. Vattenfall NV does not apply hedge accounting and therefore these fair value losses are reflected in profit and loss.

Other external expenses

Operating expenses decreased by 13.0% to EUR 376 million in 2019. This decrease is mainly due to accounting effects. In 2019, the implementation of IFRS 16 resulted in a reclassification of lease expenses from Other external expenses to Depreciation. In addition, the direct costs related to our construction activities for third parties is reclassified from Other external expenses in 2018 to Cost of purchases in 2019. Reference is made to Note 3 for more detailed information on the implementation of IFRS 16.

Personnel expenses

The total number of FTE increased from 3,418 FTE at the end of 2018 to 3,558 FTE at the end of 2019, mainly due to the acquisition of DELTA Energie and growth in wind.

Other operating income and expenses, net

The other income of EUR 81 million in 2019, mainly consists of the compensation for the early closure of Hemweg 8, compensation from insurances and dunning fee. The other income of EUR 45 million in 2018, mainly included the result on the transfer of the UK Wind entities to Vattenfall AB and dunning fee.

EBITDA/EBIT

EBITDA (earnings before interest, taxes, depreciation and amortisation) decreased from EUR 482 million positive in 2018 to EUR 28 million negative in 2019, primarily due to the unrealised negative price development on our power and gas purchase contracts.

Depreciation, amortisation and impairments increased from EUR 181 million to EUR 272 million in 2019, due to higher impairments and implementation of IFRS 16. In 2019 the impairments amounted to EUR 68 million, mainly relating to early closure of Hemweg 8, while the impairments in 2018 amounted to EUR 12.

EBIT decreased from EUR 301 million positive in 2018 to EUR 300 million negative in 2019, primarily due to the unrealised negative price development on our power and gas purchase contracts and higher impairments. In 2019, we realised a positive EBIT of EUR 128 million, when excluding the unrealised fair value losses on own-use power and gas purchase contracts (EUR 438 million).

Balance sheet

Condensed balance sheet

Amounts in EUR million	31 December 2019	31 December 2018
Non-current assets	2,632	2,346
Current assets	1,738	2,941
Cash and cash equivalents	83	45
Total assets	**4,453**	**5,332**
Equity	2,032	2,996
Non-current liabilities	393	292
Current liabilities	2,028	2,044
Total equity and liabilities	**4,453**	**5,332**

Non-current assets

Non-current assets increased by 12% to EUR 2,632 million at the end of 2019. This increase is mainly due to the acquisition of DELTA Energie in 2019 and the investments in the Wieringermeer and Hollandse Kust Zuid Windfarms. In addition the non-current assets increased as a result of the recognition of right-of-use assets due to implementation of IFRS 16.

Current assets

Current assets decreased by 41% to EUR 1,738 million at the end of 2019. The decrease was caused mainly by lower trade receivables from related parties as a result of dividend payment and capital reduction.

Cash and cash equivalents

Cash and cash equivalents increased by EUR 38 to EUR 83 million at the end of 2019. A positive cashflow from operations (EUR 487 million), mainly due to positive EBIT when excluding the unrealised fair value losses, was used for investment in Property, plant and equipment (EUR 324 million), acquisition of DELTA Energie and Senfal (EUR 66 million).

Non-current liabilities

Non-current liabilities increased by 35% to EUR 393 million at the end of 2019. The increase was caused mainly by the recognition of lease liabilities due to implementation of IFRS 16.

Current liabilities

Current liabilities decreased slightly by 1% to EUR 2,028 million.

Net cash position

Reconciliation net cash position

Amounts in EUR million	31 December 2019	31 December 2018
Cash and cash equivalents	83	45
In-house Vattenfall group cash pool	333	874
Total free cash	**416**	**919**
Non-current interest-bearing liabilities	80	27
Current interest-bearing liabilities	31	2
Gross debt position	**111**	**29**
Net cash/(debt) position	**305**	**890**

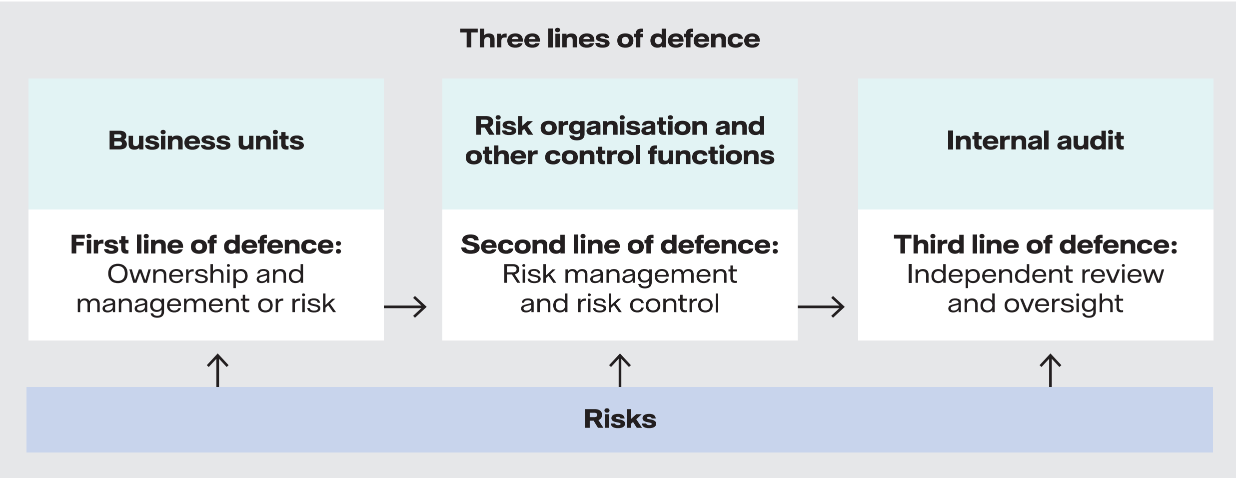
The net cash position at the end of 2019 amounted to 305 million, compared to a net cash position of EUR 890 million at the end of 2018. The decrease in the net cash position is mainly due to a dividend payment and share premium repayment to Vattenfall AB of EUR 750 million.

Business risks and Risk management

Risk management

Vattenfall NV is exposed to a number of risks that could have an adverse impact on operations and outcome. A better understanding of and control over these risks can potentially generate better results from the business activities. The Vattenfall NV Management Board is responsible for the company's risk management and control system. Vattenfall NV strives for transparency with regard to risk exposure and recognises all risks that may impact the company.

Vattenfall NV, as part of Vattenfall, applies the 'three lines of defence' model for the management and control of risks. The first line of defence consists of the business units, which own and manage risks. The risk organisation makes up the second line of defence and is responsible for monitoring and controlling risks. The internal audit function is the third line of defence.



The following paragraphs describe the performed risk management efforts.

The Vattenfall Risk Management Framework

The objective of the Vattenfall Risk Management Framework is to provide reasonable assurance that the achievement of strategic and operational objectives is effectively monitored, that the financial reporting is reliable and that current laws and regulations are complied with.

The framework is part of Vattenfall NV's Governance and designed to ensure an acceptable risk exposure, based on a thorough and transparent analysis of Vattenfall NV's risks, thus facilitating the in-control situation and risk exposure based on an appropriate assessment of the risk-reward balance. The framework facilitates the monitoring of risks with a potential impact on the organisation and is based on a set of best practice policies, procedures and internal control mechanisms. Vattenfall NV has a limited risk appetite and all risks as reported and discussed are continuously reconciled with this risk appetite.

The Vattenfall Risk Management Framework focuses on ensuring that the most important risks are identified and that appropriate control measures are executed to manage these risks. The Framework is based on the COSO Enterprise Risk Management (ERM) Framework.

The ERM is executed as a continuous process for identifying, assessing, managing and following up on risks at all levels of the business at an early stage. An update of the risk situation is presented periodically for discussion at Management and Supervisory Board level.

Important components of the Vattenfall Risk Management Framework are:

- The Vattenfall Management System (VMS) which Vattenfall NV, as part of Vattenfall, implemented and which contains regulations, guidelines and procedures that are relevant for all Vattenfall employees and for the relationship between Vattenfall AB and its subsidiaries, Business Units, Staff Functions and other Vattenfall companies. VMS includes the Vattenfall Code of Conduct and the Whistle-blower Policy, which are publicly accessible at www.vattenfall.com. VMS also comprises of the IFRS accounting manual and the reporting manual;
- The Vattenfall Code of Conduct, which sets the behavioural rules for all employees. The Code of Conduct fosters an honourable business culture in which the rules applicable to employees are clear. Breaches of the Code of Conduct are not tolerated. If they come to the attention of Vattenfall, they will be investigated and may lead to sanctioning;

- The Risk Management organisation, headed by the Chief Risk Officer of Vattenfall, supports Vattenfall NV in applying Vattenfall's risk framework. The Risk Management organisation monitors market risk on a daily basis, manages credit risk, oversees compliance with policies and risk limits, and guides the group-wide reporting of significant business risks. Together with other specialist risk stakeholders (for example health and safety, information security), the Risk Management organisation supports the Business Units in the identification, quantification, mitigation, monitoring and reporting of risk;
- The Integrity function, which advises and reports on issues with regard to competition, anti-bribery/ corruption, conflict of interest, the whistleblowing function and inside information. In addition, the function advises management on measures to enhance compliance and monitoring compliance risks, and it stimulates awareness of the Code of Conduct. The Vattenfall NV Integrity, Fraud and Incidents report is submitted semi-annually to the Vattenfall NV Management Board. This report focuses on integrity developments, fraud and other incidents reported in the Netherlands and is a combined report of Internal Audit and the Integrity department;
- The Legal department, which submits the Claims & Litigation report to the Management Board of Vattenfall NV. The report contains a summary of current and potential legal proceedings and disputes;
- The Vattenfall Internal Financial Control Framework (IFC), which reports on the effectiveness of the controls which aims to assure reliable financial reporting and which is partly based on the results of the key controls for the primary processes within the different business areas;
- The planning & control cycle, in which annual budgets are assigned for each organisational unit and the outcome of which is subsequently discussed between the Management Board and the Business Units;
- The periodic reporting on Business Units' financial and operational performance, partly based on the system of Key Performance Indicators (KPIs);
- The risk reports, highlighting the risks identified as having a potentially significant impact on the business. These reports are challenged by Risk Management and further reviewed in semi-annually sessions with members of the Management Board. These Business Unit risk reports are used as the basis for Risk Managements' formulation of the semi-annually Enterprise Risk Report, which summarises the most significant risks facing the organisation. This report is discussed with the Supervisory Board;
- The responsible management's confirmation at corporate and unit level of the reliability of the financial reporting through signed Letters of Representation;
- The execution of audits by the Internal Audit department in conformity with the annual plan, which is approved by the Management Board. The outcome of their audits are discussed with management and summarised for the Supervisory Board;
- The follow-up of findings from internal and external audits by the Business Units, which are periodically reported on to the Management Board.

All risks are where possible quantified both with regard to (gross) exposure as well as with regard to probability. The Management Board periodically discusses all aspects of the framework, including all reported individual and aggregated quantified risks. This includes conclusions with regard to either the acceptance of the ultimate risks, or the instigation of actions to reduce risks, as well as with regard to the reconciliation with the risk appetite.

Main risks and mitigation

This section describes the most important risks within Vattenfall NV.

- Market Price Risk Assets. The revenues (Gross Margin) from Vattenfall NV's generation assets are highly dependent on the pricing developments on the energy markets.
  Mitigation(s): Risk is actively managed and monitored via the Hedge Strategy Process on Vattenfall level.
- Decrease of sales volume. Developments in energy efficiency and decentralised generation could lead to lower consumption and demand for electricity and gas resulting in lower margins on commodities. Quantified risk is medium.
  Mitigation(s): Decrease operational costs and development of volume independent solutions (e.g. solar lease, energy roof, storage).
- CO_2 low energy generation. Introduction of a CO_2 floor price and replacement of gas used for heating by district heating systems based on renewable sources might affect presently invested capital and required replacement investments.
  Mitigation(s): Continuous monitoring of and acting on technical and regulatory developments.
- Increased competition. Missing profit due to increased competition both on current customer base and innovation. Quantified risk is medium.
  Mitigation(s): Continuously monitor the market for competitive products & new developments; prioritise development areas (short term versus long term); develop non-traditional business models and actively work together with start-ups and other market entrants; attract right capability and create multi-disciplinary teams and foster customer co-creation.
- Temperature dependence of gross margin. Temperature is an important driver for gas and heat volumes. In warm

winters the volume offtake will be lower with a negative impact on gross margin. Quantified risk is low. Mitigation(s): Temperature as well as impact on volume offtake is monitored. Explore product innovation to make sales less temperature dependent.

Note 28 to the financial statements provides further qualitative and quantitative information on financial risk management.

Responsibility

Vattenfall NV's Management Board is responsible to ensure that the design and operation of Vattenfall's internal risk management and control system is effective. During the year, the design and operation of this system was monitored and evaluated, amongst other based on the business control information, the Internal Audit reports and the management letter from the external auditor.

The Vattenfall NV Enterprise Risk Management Framework does not provide absolute assurance as to the achievement of the corporate objectives, nor does it guarantee that material errors, losses, fraud or violations of laws and regulations will not occur in the operational processes and/or the financial reporting.

With due regard to the above, the Management Board is of the opinion that the internal risk management and control systems provide a reasonable assurance that the financial reporting does not contain any errors of material importance and that the risk management and control systems worked properly with regard to the financial reporting risks in the year under review.

The above was also discussed with the Supervisory Board in the presence of the internal and external auditors.

Outlook and Challenges

Our portfolio of energy solutions will be scaled by establishing sales channels that support our growth targets coupled with automated low-cost operations. This will be especially relevant for the Dutch market, where a national climate agreement was passed in the Parliament in 2019, which among other things aims at gradually phasing out natural gas. We are developing a portfolio of fossil-free decentralised heating solutions to achieve a relevant market share in the transition to a fossil-free heating system in the Netherlands. In addition we are developing our district heating network, connecting new customers and increase the sourcing of green heat from industrial facilities owned by third parties as well as heat from biomass.
We continue to grow our customer base organically while also working on retention initiatives, just as we will act upon acquisition opportunities when they arise. In 2020, we will make further steps in integrating Delta Energie BV in our processes and systems. We plan to extend our e-mobility services to all our current customer markets, capturing significant benefits of scale and enhancing value for our customers and key partners, such as leasing companies and car makers. We will continue to work towards exceeding our customers' sustainability expectations with our products and services. We take sustainability into account in our procurement processes and engage with internal and external partners to share best practices and learn from each other.

Renewable energy is key in supporting Vattenfall's purpose to Power Climate Smarter Living and realise the transition to fossil-free living. We will continue to invest in wind, solar, and battery projects in the coming years as well as optimise our operations to maximise renewable electricity generation in a sustainable manner. With respect to our existing wind farms, costs will be lowered by raising the level of standardisation, digitalisation, and data analysis for predictive maintenance and optimised marketing of the electricity generated. Sustainability is the basis for Vattenfall's strategy and is a prerequisite for long-term profitability. In the wind, solar and battery business, sustainability has been identified as one of the key levers to facilitate our growth ambition. In the coming years we will heavily invest in the development of the wind farms Hollandse Kust Zuid 1 to 4 and Wieringermeer, amongst others. The investments will be financed through positive cash flows from operations and if necessary by internal loans from our parent. We have a credit facility in place with our parent Vattenfall AB of EUR 500 million, which is currently not utilised.

We are committed to reduce CO_2 emissions from our power plants. One example of these efforts is to run a pilot project to replace natural gas with hydrogen in our Magnum plant in Eemshaven. In the coming years we will demolish the Hemweg 8 coal-fired power plant. Together with partners the Hemweg location will be developed into a site where sustainable heat and electricity can be produced for our customers.

Covid-19

The world has drastically changed due to the Covid-19 pandemic, affecting the whole world, with a lock-down in Europe and more pressure on the industry. We are proud of all our employees who are working hard every day to ensure the continuation of stable delivery of electricty, gas and heat to our customers. They show a fighting spirit to keep making this possible despite the challenging times. We have taken measures to reduce the risks of the virus for our employees. Who can work from home has to stay home and we support them in various ways. We are following all instructions from the Government and we implemented protocols and measures to mitigate the risk for our employees that can not work from home as they work in vital processes or at the sites of our clients. Up to the publication of this report we have not seen any major disruptions in our operations.

The virus has impact on the whole economy, affecting both the energy demand from our business consumers and the energy prices. This will have impact on our performance in 2020. We are therefore closely monitoring our financial situation and taking measures to secure our operations. In light of the current Covid-19 situation and a careful evaluation of our risk-reward balance against the remainder of our strong pipeline and the rest of our ongoing projects, we have decided not to participate in the tender for Hollandse Kust Noord and to not pay any dividend to our shareholder during the course of 2020 relating to financial year 2019.

Composition of the Management and Supervisory Board

Currently there are no female members on the Management Board, which is due to the small size of the board. The distribution of board seats between men and women in the Supervisory Board is in line with the Act on Management and Supervision.

A final word

We have successfully introduced our Vattenfall brand and purpose to the public in the Netherlands. We see a positive trend in customer loyalty scores (NPS) coupled with a stable customer base in a highly competitive environment. Without the commitment and hard work of our staff, we could not have achieved all that we have nor would we be in a position to overcome the challenges we face. We are extremely proud of all our employees in these difficult circumstances and express our gratitude to all our employees for their great work during an eventful and turbulent year.

Amsterdam, 15 May 2020

The Management Board
Martijn Hagens

Financial statements

Consolidated accounts

Consolidated income statement

Amounts in EUR million, 1 January - 31 December	Note	2019	2018
Net sales	5	2.832	2.619
Cost of purchases		-2.271	-1.468
Other external expenses	7	-376	-432
Personnel expenses	31	-296	-281
Other operating incomes and expenses, net		81	45
Participations in the results of associated companies	15	2	-1
Operating profit before depreciation, amortisation and impairment losses (EBITDA)		**-28**	**482**
Depreciation, amortisation and impairments	12, 13	-272	-181
Operating profit (EBIT)		**-300**	**301**
Financial income	8	2	6
Financial expenses	9	-5	-11
Profit before income taxes		**-303**	**296**
Income tax	10	89	-85
Profit for the year attributable to owner of the Company		**-214**	**211**

Consolidated statement of comprehensive income

Amounts in EUR million, 1 January - 31 December	2019	2018
Profit for the year	**-214**	**211**
Other comprehensive income		
Items that will be reclassified to profit or loss when specific conditions are met		
Cash flow hedges - changes in fair value	–	3
Translation differences	–	20
Income taxes related to items that will be reclassified	–	-1
Total Items that will be reclassified to profit or loss when specific conditions are met	**–**	**22**
Total other comprehensive income, net after income taxes	**–**	**22**
Total comprehensive income for the year	**-214**	**233**
Attributable to owner of the Company	-214	233

Consolidated balance sheet

Amounts in EUR million	Note	31 December 2019	31 December 2018
Assets			
Non-current assets			
Intangible assets	6, 12	267	170
Property, plant and equipment	6, 13	2,076	1,888
Participations in associated companies and joint ventures	15	28	31
Other shares and participations		2	2
Derivative assets	27	12	98
Deferred tax assets	10	194	116
Contract assets	5	6	–
Other non-current receivables		47	41
Total non-current assets		**2,632**	**2,346**
Current assets			
Inventories	16	85	130
Trade receivables and other receivables	17	1,245	2,318
Advance payments paid	18	1	8
Derivative assets	27	190	353
Prepaid expenses and accrued income	19	192	107
Current tax assets	10	19	25
Cash and cash equivalents	20	83	45
Assets held for sale		6	–
Total current assets		**1,821**	**2,986**
Total assets		**4,453**	**5,332**
Equity and liabilities			
Equity attributable to owner of the Company			
Share capital and premium		2,895	3,481
Retained earnings incl. profit for the year		-863	-485
Total equity attributable to owner of the Company	29	**2,032**	**2,996**
Non-current liabilities			
Interest-bearing liabilities	21	80	27
Provisions	23	84	75
Derivative liabilities	27	34	6
Deferred tax liabilities	10	1	1
Contract liabilities	5	194	183
Total non-current liabilities		**393**	**292**
Current liabilities			
Trade payables and other liabilities	24	1,236	1,626
Contract liabilities	5	26	42
Advance payments received	25	6	4
Derivative liabilities	27	210	39
Accrued expenses and deferred income	26	500	305
Current tax liabilities	10	2	6
Interest-bearing liabilities	21	31	2
Provisions	23	16	20
Liabilities associated with assets held for sale		1	–
Total current liabilities		**2,028**	**2,044**
Total equity and liabilities		**4,453**	**5,332**

Consolidated statement of cash flows

Amounts in EUR million, 1 January-31 December	2019	2018
Operating activities		
Operating profit before depreciation, amortisation and impairment losses	**-28**	**482**
Tax paid	-13	-34
Capital gains/losses, net	13	8
Interest received	2	1
Interest paid	-3	-2
Changes in the fair value of derivatives	448	-58
Other, incl. non-cash items	-2	-48
Funds from operations (FFO)	**417**	**349**
Changes in inventories	45	-45
Changes in operating receivables	255	760
Changes in operating liabilities	-239	-687
Other changes	9	-19
Cash flow from changes in operating assets and operating liabilities	**70**	**9**
Cash flow from operating activities	**487**	**358**
Investing activities		
Acquisitions in group companies	-66	–
Other investments in non-current assets	-346	-228
Total investments	**-412**	**-228**
Divestments	–	193
Loans granted	-17	–
Loans repaid	11	–
Cash flow from investing activities	**-418**	**-35**
Cash flow before financing activities	**69**	**323**
Financing activities		
Interest-bearing debt raised	1	3
Interest-bearing debt repaid	-32	-27
Dividends paid to owners	-	-286
Cash flow from financing activities	**-31**	**-310**
Cash flow for the year	**38**	**13**
Cash and cash equivalents		
Cash and cash equivalents at start of year	45	32
Cash flow for the year	38	13
Cash and cash equivalents at end of year	**83**	**45**

Consolidated Statement of changes In equity

	Attributable to owner of the Company				
Amounts in EUR million	**Share capital and premium**	**Reserve for hedges**	**Translation reserve**	**Retained earnings**	**Total**
Balance brought forward 2019	3,481	–	–	-485	2,996
Profit for the year	–	–	–	-214	-214
Cash flow hedges - changes in fair value	–	–	–	–	–
Translation differences	–	–	–	–	–
Income taxes related to other comprehensive income	–	–	–	–	–
Total other comprehensive income for the year	–	–	–	–	–
Total comprehensive income for the year	–	–	–	-214	-214
Dividends paid to owners	–	–	–	-164	-164[1]
Share premium repayment	-586	–	–	–	-586[1]
Total transactions with equity holders	-586	–	–	-164	-750
Balance carried forward 2019	2,895	–	–	-863	2,032

	Attributable to owner of the Company				
Amounts in EUR million	**Share capital and premium**	**Reserve for hedges**	**Translation reserve**	**Retained earnings**	**Total**
Balance brought forward 2018	3,481	-2	-20	-410	3,049
Profit for the year	–	–	–	211	211
Cash flow hedges - changes in fair value	–	3	–	–	3
Translation differences	–	–	20	–	20
Income taxes related to other comprehensive income	–	-1	–	–	-1
Total other comprehensive income for the year	–	2	20	–	22
Total comprehensive income for the year	–	2	20	211	233
Dividends paid to owners	–	–	–	-286	-286[2]
Share premium repayment	–	–	–	–	–
Total transactions with equity holders	–	–	–	-286	-286
Balance carried forward 2018	3,481	–	–	-485	2,996

1) During the year 2019, dividends amounting to EUR 164 million were distributed to the shareholder. The dividend per share amounted to EUR 1.20. In addition to the dividend payment, the shareholder of the Company decided to a share premium repayment of EUR 586 million (EUR 2.08 per share).
2) During the year 2018, dividends amounting to EUR 286 million were distributed to the shareholder. The dividend per share amounted to EUR 2.09.

See also Note 29 to the consolidated accounts, Specifications of equity.

Notes to the consolidated accounts

Note 1 Company information

Vattenfall N.V. is a public limited liability company, registered in Amsterdam, the Netherlands. The most significant activities of Vattenfall N.V. and its subsidiaries comprise of the production and supply of electricity, gas, heat and cooling to customers in the Netherlands, as well as a broad portfolio of energy-saving products and services.

'We', 'Vattenfall NV' or 'the Company' or similar expressions are used in these consolidated accounts as a synonym for Vattenfall N.V. and its subsidiaries. 'Vattenfall AB', 'the Parent' or 'the parent company' are used in these consolidated accounts as a synonym for Vattenfall AB and its subsidiaries. Vattenfall NV originated in 2009 from the unbundling of former parent company N.V. Nuon into a production and supply company, N.V. Nuon Energy, and a grid company, Alliander N.V. As a consequence of a rebranding project, the statutory name of the Company changed from N.V. Nuon Energy into Vattenfall NV. The name became effective on 5 March 2019. Vattenfall NV is registered at the Dutch Chamber of Commerce with registration number 33292246.

Vattenfall AB, owned by the Swedish government, is the sole shareholder of Vattenfall NV. The financial data of Vattenfall NV is included in the consolidated accounts of Vattenfall AB.

These consolidated accounts for the financial year 2019 are authorised for publication by the Management Board and Supervisory Board on 15 May 2020. Subsequently, these consolidated accounts are scheduled to be adopted by the general meeting of shareholders on 15 May 2020.

As the company income statement for 2019 of Vattenfall NV is included in the consolidated accounts, a condensed income statement has been disclosed in the company accounts in accordance with Section 402, Book 2, of the Dutch Civil Code.

Note 2 Important changes in the financial statements compared with the preceding year

Restatement of financial statements for 2018

No restatements are made.

Note 3 Accounting policies

Conformity with standards and regulations

The consolidated accounts have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as well as the interpretations issued by the IFRS Interpretations Committee (IFRS IC) as endorsed by the European Commission for application within the EU.

New IFRSs and interpretations effective as from 2019

Presented below are the new accounting standards that have a material impact on Vattenfall NV's financial statements.

IFRS 16 – "Leases"

IFRS 16 – "Leases" replaces IAS 17 – "Leases" along with the accompanying interpretations. IFRS 16 became effective as from 1 January 2019. Vattenfall NV has transitioned into the new leasing standard by applying the modified retrospective approach, and therefore the 2018 financial statements are not restated. Starting 1 January 2019, a right-of-use asset along with a lease liability is recognised on the balance sheet for all lease contracts except for leases for which the underlying asset is of low value and short-term leases. Short-term leases are leasing contracts with a duration of 12 months or less.

As per 1 January 2019, a lease liability is recognised for leases that were previously classified as operating leases through application of IAS 17. The lease liability is measured as the present value of the remaining lease payments discounted by Vattenfall NV's currency and term specific incremental borrowing rate as per 1 January 2019. The right-of-use asset is recognised initially at the same value as the lease liability. In the income statement, the lease expenses are replaced by depreciation of the right-of-use asset and interest expense on the lease liability. The implementation of IFRS 16 also entails a positive effect on operating cash flows and a negative effect on cash flow from financing activities.

The implementation of IFRS 16 resulted in a higher EBITDA by EUR 31 million and in a higher interest expense by EUR 1 million in 2019, compared with previous years accounting under IAS 17 where all cost for operational lease contracts were accounted for in operating profit.

Lease liabilities as per 1 January 2019 amounted to EUR 98 million. The difference between the operating lease commitment as per 31 December 2018 according to IAS 17 and lease liabilities as per 1 January 2019 according to IFRS 16 is shown below:

Operating lease commitment as per 31 December 2018 (See note 11)	118
Recognition exemption for short-term leases and leases of low-value assets	-13
Effect of discounting operating lease commitment	-7
Lease liabilities as a result of IFRS 16 implementation	**98**
Finance lease liabilities recognised as per 31 December 2018	–
Lease liabilities as per 1 January 2019	**98**

Definition of a lease

Vattenfall NV applies the definition under IFRS 16 to determine whether or not a contract contains a lease.

As a lessee

Under IAS 17, Vattenfall NV classified leases as either operating leases or finance leases. Under IFRS this distinction is no longer made for lessees. A right-of-use asset along with a corresponding liability are created for all lease contracts except for leases for which the underlying asset is of low value and short-term leases.

New IFRSs and interpretations effective as from 2020 and later

A number of accounting standards and interpretations have been published, but have not become effective. These are not considered to have a material impact on Vattenfall NV's financial statements.

Basis of measurement

Assets and liabilities are reported at cost or amortised cost, with the exception of certain financial assets and liabilities and inventories held for trading, which are measured at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Vattenfall uses valuation methods that reflect the fair value of an asset or liability appropriately. Financial assets and liabilities that are measured at fair value are described below according to the fair value hierarchy (levels), which in IFRS 13 is defined as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).
- Level 3: Inputs for the asset or liability that is not based on observable market data (that is, unobservable inputs)

Classification into a level is determined by the lowest level input that is significant for the measurement of the fair value at the end of a reporting period. Vattenfall NV assesses whether reclassifications between the levels are necessary. Observable input data are used whenever possible and relevant. For assets and liabilities included in Level 3, fair value is modelled either on the basis of market prices with adjustments that consider specific terms of a contract, or on the basis of unobservable inputs such as future cash flows. The assumptions for the estimated cash flows are monitored on a regular basis and adjusted if necessary.

Functional and presentation currencies

The functional currency is the currency of the primary economic environment in which each Vattenfall NV's entity operates. The Company's functional currency is Euro (EUR), which is also the presentation currency of both Vattenfall NV's consolidated and company financial statements. This means that the financial statements are presented in Euro. Unless otherwise stated, all figures are rounded off to the nearest million Euro (EUR million).

Significant accounting policies

The accounting policies of the Group described below and in each respective note to the consolidated accounts have been applied consistently for all periods presented in the consolidated financial statements.

Principles of consolidation

The consolidated financial statements cover Vattenfall NV, subsidiaries, associated companies and joint ventures and joint arrangements that are reported as a joint operation according to IFRS 11.

Subsidiaries

Subsidiaries are all entities over which Vattenfall NV has control. Control is considered to exist when the following three criteria are met: (1) the investor is exposed to or is entitled to a variable return from the investment, (2) the investor has the opportunity to influence the return through its opportunity to govern the company, and (3) there is a link between the return that is received and the opportunity to govern the company. By influence is meant the rights that allow the investor to govern the relevant business, that is, the business which significantly influences the company's return. Business combinations are accounted for using the purchase method. Subsidiaries' financial statements, which are prepared in accordance with the Company's accounting policies, are included in the consolidated accounts from the point of acquisition to the date when control ceases.

Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. Joint ventures are reported in accordance with the equity method.

Associated companies

Associated companies are companies in which Vattenfall NV has a significant – but not controlling – influence with other owners over their operational and financial management, usually through shareholdings corresponding to between 20% and 50% of the votes. From the point at which the significant influence is acquired, participations in associated companies are reported in the consolidated accounts in accordance with the equity method.

Transactions that are eliminated upon consolidation

Intragroup receivables and liabilities, income and expenses, as well as gains or losses arising from intragroup transactions between Vattenfall NV companies, are eliminated in their entirety when preparing the consolidated accounts. Gains arising from transactions with associated companies and joint ventures are eliminated to an extent that corresponds to Vattenfall NV's holding in the company. Losses are eliminated in the same manner as gains, but are treated as an indicator of impairment.

Foreign currencies

Transactions in foreign currencies

Transactions in foreign currencies are translated to the functional currency at the exchange rate on the day of the transaction. On the balance sheet date, monetary assets and liabilities in foreign currencies are translated to the functional currency at the exchange rate applicable on that day. Exchange rate differences arising from translation of currencies are reported in the income statement. Operationally derived exchange gains and losses are shown under Other operating income and Other operating expenses, respectively. Financially derived exchange gains and losses are shown as Financial income and Financial expenses, respectively.

Important estimations and assessments in the preparation of the financial statements

Preparation of the financial statements in accordance with IFRS requires the Company's executive management and board of directors to make estimations and assessments as well as to make assumptions that affect application of the accounting policies and the reported amounts of assets, liabilities, income and expenses. These estimations and assessments are based on historic experience and other factors that seem reasonable under current conditions. The results of these estimations and assessments are then used to establish the reported values of assets and liabilities that are not otherwise clearly documented from other sources. The final outcome may deviate from the results of these estimations and assessments. The estimations and assessments are revised on a regular basis. The effects of changes in estimations are reported in the period in which the changes were made if the changes affected this period only or in the period the changes were made and future periods if the changes affect both the current period and future periods.

Important estimations and assessments are described further in the following notes to the consolidated accounts:

- Note 10 Income taxes
- Note 12 Intangible assets
- Note 13 Property, plant and equipment
- Note 23 Provisions

Note 4 Acquired and divested operations

Acquired operations

Acquisitions in 2019

At the end of February 2019, Vattenfall NV finalised the acquisition of 100% of the Dutch electricity and gas sales company DELTA Energie B.V. through acquiring all (voting) shares. DELTA Energie B.V. supplies green electricity and gas to households and small and medium-sized companies, mainly in the Dutch province Zeeland. The company has about 120 employees and 170,000 customers.

The fair value of the identifiable assets and liabilities, at the date of acquisition, amounts to EUR 78 million. The material identifiable assets and liabilities are the recognition of an intangible asset, representing the customer list, of EUR 105 million and the related deferred tax liability of EUR 24 million. The purchase consideration was paid in cash and there is no contingent consideration. The acquisition did not give rise to goodwill on acquisition date.

At the end of March 2019, Vattenfall finalised the acquisition of the Dutch company Senfal B.V. Senfal B.V. is a company that offers innovative software services to large industrial customers, wind and solar farms and owners of large batteries.

Acquisitions in 2018

In September 2018 Vattenfall NV acquired the shares of Zonnepark Gasselternijveen B.V. and Zonnepark Coevorden B.V.

Divested operations

Divestments in 2019

No divestments took place in 2019.

Divestments in 2018

In August 2018 Vattenfall NV sold the UK Wind entities to Vattenfall AB. The carrying amount of these divested entities amounted to EUR 139 million. Taking into consideration the release of the translation reserve the capital gain of this sales transaction amounted to EUR 33 million. The consideration received for the transfer of the shares in UK Wind amounted to EUR 193 million.

Note 5 Net sales

Accounting policy

Net sales include sales proceeds from sales of electricity, heat and gas, energy trading and other revenues. Materially all revenues are generated in the Netherlands.

Vattenfall NV offers customers discounts and bonuses on sale of both electricity, gas and heat through various campaigns. The Company recognises discounts and bonuses when the performance obligation to the customer is satisfied and are recognized over the contract term.

Various sales channels are used to sell Vattenfall NV's products which gives rise to different types of costs associated with sales activities. These costs to obtain a contract related to revenues from contracts with customers are shown under Note 12. Capitalisation of costs to obtain is either based on a portfolio approach (BtC) or a contract by contract approach (BtB). BtC applied practical expedients by which all contracts with a duration of more than 1 year are deemed one portfolio and costs to obtain a contract associated to 1 year contracts are expensed when incurred. The amortisation schedule depends on the contract duration by taking into consideration the probability that customers terminate their contract prior to the end of the contractually agreed period.

Sales and distribution of electricity, heat and gas

Sales of electricity, heat and gas and related distribution are recognised as revenue at the time of delivery, excluding value-added tax and excise taxes. Depending on the system for metering of consumption, Vattenfall recognises revenues either based on expected consumption, with a reconciliation when the readout takes place, or based on actual consumption and adjusted for back-delivery.

Connection fees

Heat is responsible for physical connections of the Heating networks to houses and buildings. The fee for the physical connection is paid by the customer when the connection is established. Revenue from connection fees is recognised over time since Vattenfall NV handles maintenance and repairs of the assets used in the physical connection, which is satisfied over time. The basis for revenue recognition of connection fees is the useful life of the underlying assets.

Vattenfall NV recognises revenues from contracts with customers and other revenues through profit or loss.

	2019	2018
Sales of electricity	1,137	971
Sales of gas	1,197	1,184
Sale of heat and steam	176	165
Service and consulting	286	284
Other Revenues	36	15
Total Revenues	**2,832**	**2,619**

Revenue from contracts with customers is recognised when the performance obligation is satisfied. The company applies the practical expedient not to disclose information for performance obligations if the performance obligation is part of a contract that has an original duration of one year or less.

The payment recognised may not match the revenue for the period, which results in the recognition of contract assets and contract liabilities. The company applies the practical expedient not to adjust for the effects of a significant financing component if it is expected that, at inception, the period between satisfying the performance obligation and the payment will be one year or less.

Contract balances	2019	2018
Contract assets	6	–
– of which, released as cost from opening balance during the year	2	–
Contract liabilities	220	225
– of which, released as revenue from opening balance during the year	8	8

Contract liabilities relate to cashbacks, obligations resulting from loyalty programs and construction contributions received. Construction contributions received are mainly attributable to district heating grids. The amortisation periods of these received amounts are equal to the depreciation periods of the underlying assets with a maximum of 30 years.

Note 6 Impairment losses and reversed impairment losses

Accounting policy

General principles

Assessments are made throughout the year for any indication that an asset may have decreased in value. If there is an indication of this kind, the asset's recoverable amount is estimated. For intangible assets that are still not ready for use, the recoverable amount is calculated at least annually or as soon there is an indication that an asset has decreased in value.

If the essentially independent cash flow for an individual asset cannot be established for the assessment of any need for impairment, the assets must be grouped at the lowest level where it is possible to identify the essentially independent cash flow (a so-called cash-generating unit). An impairment loss is reported when an asset or cash-generating unit's reported value exceeds the recoverable amount. Any impairment loss is recognised in profit or loss. Impairment of assets attributable to a cash-generating unit is allocated primarily to goodwill. Thereafter, a proportional impairment loss is conducted of other assets that are part of the unit.

Calculation of the recoverable amount

The recoverable amount is the higher of fair value less costs to sell and value in use. When calculating value in use, the future cash flow is discounted by a discounting rate that takes into consideration risk-free interest and the risk associated with the specific asset.

Reversal of impairment losses

Impairment of goodwill is never reversed. Impairment of other assets is reversed if a significant and lasting change has occurred in the assumptions that formed the basis for the calculation of the recoverable amount. An impairment loss is reversed only if the asset's carrying amount after reversal does not exceed the carrying amount that the asset would have had if the impairment loss had not been recognised.

Financial information

Process for impairment testing

The main assumptions that executive management has used in calculating projections of future cash flows in cash-generating units with finite useful lives are based on forecasts of the useful life of the respective assets. The projected cash flows are based on market prices and on Vattenfall's long-term market outlook. The calculated revenues in these forecasts are based on Vattenfall's long-term pricing projections, which are the result of a large number of simulations of the prices of oil, coal, gas, electricity and CO_2 emission allowances in the relevant commodity markets. The long-term market outlook is based on internal and external input parameters and is benchmarked against external price projections. Based on the price assumptions, the dispatch of the power plants is calculated, taking technical, economic and legal constraints into consideration. Technical flexibility of the assets, that is the ability to adapt generation to changes in spot market prices, has been taken into account. Cash flow projections of other cash-generating units are based on the business plan for the coming five years, after which their terminal value is taken into account, based on a growth factor of 0%-0.5% (0%-0.5%). If the final year of the business plan horizon does not represent reasonable basis for assessing long-term value, an extended forecast may be required to arrive at a steady-state earnings situation on which to calculate the terminal value.
Future cash flows have been discounted to value in use using the following discount rates:

Discount rate Thermal Power

2019		2018	
Before tax	After tax	Before tax	After tax
8.2%	6.9%	8.0%	7.0%

The discount rate varies for the various asset classes, depending on their risk. When setting the discount rate, consideration has been given to the extent of exposure this has for changes in wholesale prices of electricity, fuel, CO_2 emission allowances, and regulatory risks. An increase in the discount rate by 0.5 percentage points would decrease the estimated value in use for the cash-generating unit Thermal Power by approximately EUR 116 million (110). On the other hand a decrease in the discount rate by 0.5 percentage points would increase the estimated value in use for the cash-generating unit Thermal Power by approximately EUR 141 million (132).

Electricity prices and margins for generation assets represent another major value driver. The most important production margins are the "clean spark spread" for gas-fired power plants and the "clean dark spread" for hard coal-fired power plants. Those spreads include electricity prices as well as the respective cost for fuel and CO_2 emission allowances to produce the electricity, considering fuel type and efficiency factors. Based on the assumptions used in the impairment testing, a reduction of 5% in future margin would decrease the estimated value in use for the cash-generating unit Thermal Power segment by 8% or approximately EUR 136 million.

Vattenfall NV has performed impairment testing by calculating the value in use of the cash-generating units. The structure of the cash-generating units, which represent the smallest group of identifiable assets that generate continuous cash inflows that are largely independent of other assets or groups of assets, is based on the Company's Business Area structure.

Vattenfall NV closely monitors market developments on a continuous basis and their impact on operations.

In addition to the regular impairment test for the Cash Generating Units, Vattenfall recognises impairment losses for individual assets if these are planned to be divested and the expected consideration is below the carrying amount. No previously recognised impairment losses were reversed in the income statement in 2019.

Impairment losses 2019

Impairment losses charged against operating result in 2019 amounted to EUR 68 million and mainly related to the closing, in line with the decision of and agreement with the Dutch government, of the Company's coal-fired power plant, Hemweg 8. The related assets have been impaired to nil based on the estimate to the fair value less costs of disposal. The fair value less costs of disposal has been estimated based on expected proceeds, which represents a level 3 valuation.

Impairment losses 2018

Impairment losses charged against operating result in 2018 amounted to EUR 11 million.

Note 7 Other external expenses

	2019	2018
Purchased services	136	161
IT expenses	22	21
Consulting expenses	81	72
Non-capitalised lease expenses	12	33
Marketing and selling expenses	43	29
Other	82	116
Total	**376**	**432**

Note 8 Financial income

Accounting policy

Interest income is reported as it is earned. The calculation is made on the basis of the return on underlying assets in accordance with the effective interest method. Dividend income is reported when the right to receive payment is established. Interest income is adjusted for transaction costs and any rebates, premiums and other differences between the original value of the receivable and the amount received when due.

Financial information

	2019	2018
Interest income	2	6
Total	**2**	**6**

Note 9 Financial expenses

Accounting policy

For calculation of interest effects attributable to provisions, discount rates have been used, see Note 23 to the consolidated accounts, Provisions, for the discount rates used. Issue costs and similar direct transaction costs for raising loans are distributed over the term of the loan in accordance with the effective interest method. Borrowing costs directly attributable to investment projects in non-current assets which take a substantial period of time to complete are not reported as a financial expense but are included in the cost of the non-current asset during the construction period. Leasing fees pertaining to finance leases are distributed between interest expense and amortisation of the outstanding debt. Interest expenses are distributed over the leasing period so that each accounting period is charged in the amount corresponding to a fixed interest rate for the reported debt in each period. Variable fees are carried as an expense in the period in which they arise.

Financial information

	2019	2018
Interest expenses attributable to loans	4	10
Interest effects attributable to provisions	1	1
Total	**5**	**11**

Interest expenses, attributable to lease liabilities, amount to EUR 1 million and are included in interest expenses attributable to loans.

Note 10 Income taxes

Accounting policy

Income taxes comprise current tax and deferred tax. Income tax is reported in the income statement except when the underlying transaction is reported in Other comprehensive income or in Equity, whereby also the associated tax effect is reported in Other comprehensive income and Equity, respectively.

Current tax is tax to be paid or received for the current year, with the application of the tax rates that are established or, established in practice as of the balance sheet date. Adjustments of tax paid attributable to previous periods are also included in this.

Deferred tax is calculated in accordance with the balance sheet method on the basis of temporary differences between the reported and taxable values of assets and liabilities. The valuation of deferred tax is based on how the reported value of assets or liabilities is expected to be realised or settled. Deferred tax is calculated in accordance with the tax rates and tax rules that have been established or have been established in practice by the balance sheet date.

Important estimations and assessments

Deferred tax positions concerning non-deductible temporary differences and tax-loss carry forwards are recognised to the extent that the realisation of the related tax benefit through future taxable profits is assessed as probable. The recognition of deferred tax assets is assessed annually. This assessment is mainly based on the business plan for the coming five years and on the assumption that future earnings after five years will be consistent with the business plan, that applicable tax laws and tax rates will remain unchanged in the countries in which Vattenfall NV is active, and that applicable rules for exercising tax loss carry forwards will not be changed. The value of deferred tax positions is reduced when it is no longer considered likely that they can be utilised.

Financial information

Breakdown of the reported income tax

	2019	2018
Current tax expense (-)/ tax income (+)	-8	-29
Adjustment of current tax expense (-) / tax income (+) for prior periods	-4	4
Deferred tax expense (-)/ tax income (+)	101	-60
Total income tax expense	**89**	**-85**

The difference between the nominal Dutch tax rate and the effective tax rate is explained as follows:

	2019		2018	
	%		%	
Result before tax		-303		296
Dutch income tax rate at 31 December	25.0	76	25.0	-74
Difference in tax rate in foreign operations	-0.3	-1	0.4	-1
Tax adjustments for previous periods	0.1	–	-1.2	4
Non-taxable income	0.5	2	-3.4	10
Revaluation of previously non-valued losses and other temporary differences	0.0	–	-0.3	1
Non-deductible expenses	-0.1	–	0.1	–
Energy investment allowance	1.9	6	-0.5	1
Changes in tax rates	1.4	4	8.3	-25
Other	0.8	2	0.2	-1
Effective tax rate	**29.3**	**89**	**28.6**	**-85**

Balance sheet reconciliation of current tax

	2019	2018
Balance brought forward net asset (+)/ net liability (-)	19	5
Reclassification	–	14
Acquired companies	-1	–
Divested companies including liabilities associated	–	-9
Change via income statement	-12	-25
Taxes paid, net	13	34
Reclassification to/from other receivables/liabilities	-2	–
Balance carried forward net asset (+)/ net liability (-)	**17**	**19**

Breakdown of the deferred tax

	2019	2018
Property, plant and equipment	145	178
Intangible assets	-12	4
Non-settled derivatives	31	-73
Settled derivatives	–	1
Provisions	7	6
Liabilities	20	–
Other	2	-1
Total	**193**	**115**

The deferred tax positions for property, plant and equipment and intangible assets mainly represent the differences between the carrying amount and the tax base of the power-generating facilities and IFRS 16 right-of-use and are recorded at statutory tax rates. The deferred tax positions in respect of derivatives reflect the temporary differences – measured at the prevailing tax rate – between the valuation of derivatives for tax purposes and the valuation in the consolidated accounts. The deferred tax position for liabilities mainly represent the differences between carrying amount and tax base IFRS 16 leases. The difference between de movement in the net deferred tax position in 2019 and the net deferred tax income in the consolidated income statement is mainly caused by the PPA of DELTA Energie B.V. which resulted in a deferred tax liabilty position of about EUR 23 million with no effect on income.

Unrecognised deferred tax assets

Unrecognised deferred tax assets relate to the temporary differences in the valuation of tax losses carried forward and amount to EUR 2 million (2). These tax losses carried forward relate to losses in the Netherlands where insufficient taxable profit is considered to be available in the foreseeable future to recognise the losses carried forward. The tax losses up to and including 2018 in the Netherlands expire in the coming 1-8 years. The tax losses from 2019 onwards in the Netherlands expire after 6 years.

Note 11 Leasing

Accounting policy

Leased assets

A right-of-use asset along with a lease liability are recognised on the balance sheet for all lease contracts except for leases for which the underlying asset is of low value or if the contract duration is 12 months or less. For these types of lease contracts the practical expedient is applied and by which costs incurred are expensed directly.

The right-of-us-asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct cost incurred and an estimate of costs to dismantle and remove the underlying asset.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term, while the leasing payments are reported as interest and amortisation of the debts.

The lease liability is initially measured at the present value of the lease payments outstanding at the commencement date, discounted using Vattenfall NV's incremental borrowing rate. After the commencement date, the amount of lease liabilities increases to reflect the accretion of interest and is reduced for the lease payments made. The commitment to pay future leasing charges is reported as a non-current or current liability.

Lease payments included in the measurement of the lease liability comprise:

- Fixed payments
- Variable lease payments that depend on an index or rate
- Amounts expected to be payable under a residual value guarantee
- The exercise price under a purchase option that Vattenfall NV is reasonably certain to exercise, lease payments in an optional renewal period, if Vattenfall NV is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless Vattenfall NV is reasonably certain not to terminate early.

Assets leased out

Assets that are leased out under finance leases are not reported as property, plant and equipment, since the risks associated with ownership are transferred to the lessee. Instead, a financial receivable is entered for the future minimum lease payments.

Assets leased out under operating leases are reported as property, plant and equipment and are subject to depreciation.

Leased property, plant and equipment

As a lessee

Vattenfall NV leases different assets, including but not limited to land within BA Wind, office buildings, vehicles and other. More detailed information on leases for which the Company is a lessee is presented below.

Right-of-use-assets	Land	Buildings	Vehicles	Other	Total
Balance as of 1 January	21	29	11	38	**99**
Depreciation for the year	-2	-9	-4	-17	**-32**
Additions to the right of use asset during the year	–	1	3	9	**13**
Other changes to the right of use asset during the year	–	-1	-1	–	**-2**
Balance carried forward	**19**	**20**	**9**	**30**	**78**

Lease liability development	
Balance as of 1 January	99
Additions to the liability	14
Repayment of the liability	-30
Balance carried forward	**83**

Total leasing related cash-outflows amounted to EUR 31 million in 2019 of which EUR 1 million is related to interest expenses.

Maturity analysis - contractual undiscounted cash flows	
< 1 year	29
1 - 5 years	43
> 5 years	14
Total as of 31 December 2019	**86**

Lease payments amounting to EUR 12 million have not been capitalised as a result of the practical expedients relating to short-term contracts and low value items or because they related to variable components of contracts.

Leasing revenues

Leasing revenues and future receivables relate mainly to leases of production facilities and heating equipment to consumers. On 31 December 2019, cost of assets reported under operating leases amounted to EUR 524 million (509). Accumulated depreciation amounted to EUR 334 million (308) and accumulated impairment losses amounted to EUR 22 million (25).

Future leasing related cash-inflows for this type of facility are broken down as follows

	Operating leasing
2020	102
2021	100
2022	97
2023	94
2024	92
2025 and beyond	104
Total	**589**

The district heating grids belonging to Alliander N.V. which had been placed within a cross-border lease, were subleased to Vattenfall Warmte N.V., which is part of Vattenfall NV, as of mid-2008 until 2020. This was done in connection with the implementation of the Independent Network Operation Act (WON) and preparations for the unbundling of our former shareholder N.V. Nuon. The strip risk (the part of the termination value, i.e. the possible compensation payable by Vattenfall NV to Alliander N.V. in the event of premature termination of the transaction, that cannot be settled from the deposits and investments held for this purpose) related to these subleased assets is borne by Vattenfall NV and amounted to USD 22 million as of 31 December 2019 (31). As these subleases are still operational, no liability for this strip risk is included on the balance sheet.

Note 12 Intangible assets

Accounting policy

Intangible assets

Intangible assets such as concessions, patents, licences, trademarks and similar rights as well as renting rights are reported at cost less accumulated amortisation and impairment losses.

Principles for amortisation

Amortisation of intangible assets other than goodwill is reported on a straight-line basis in the income statement over the estimated useful life of the asset, provided the useful life is not indefinite.

Important estimations and assessments

Intangible assets are tested for impairment in accordance with the accounting policies described in Note 6 to the consolidated accounts, Impairment losses and reversed impairment losses. The recoverable amount for cash-generating units is determined by calculating the value in use or fair value less costs to sell. For these calculations, certain estimations must be made regarding future cash flows along with other adequate assumptions regarding the required rate of return, for example.

Financial information

	2019		
	Concessions, customer lists and similar rights with finite useful lives	Cost to obtain a contract	Total
Cost			
Cost brought forward	219	61	**280**
Acquired companies	124	2	**126**
Investments	2	21	**23**
Divestments/disposals	-11	-7	**-18**
Accumulated cost carried forward	**334**	**77**	**411**
Amortisation according to plan			
Amortisation brought forward	-22	-25	**-47**
Acquired companies	-16	–	**-16**
Amortisation for the year	-13	-20	**-33**
Divestments/disposals	–	7	**7**
Accumulated amortisation according to plan carried forward	**-51**	**-38**	**-89**
Impairment losses			
Impairment losses brought forward	-60	-3	**-63**
Impairment losses for the year	–	–	**–**
Divestments/disposals	8	–	**8**
Accumulated impairment losses carried forward	**-52**	**-3**	**-55**
Carrying amount according to plan carried forward	**231**	**36**	**267**

	2018		
	Concessions, customer lists and similar rights with finite useful lives	Cost to obtain a contract	Total
Cost			
Cost brought forward	213	39	**252**
Acquired companies	–	–	**–**
Investments	6	26	**32**
Divestments/disposals	–	-4	**-4**
Accumulated cost carried forward	**219**	**61**	**280**
Amortisation according to plan			
Amortisation brought forward	-19	-14	**-33**
Acquired companies	–	–	**–**
Amortisation for the year	-3	-15	**-18**
Divestments/disposals	–	4	**4**
Accumulated amortisation according to plan carried forward	**-22**	**-25**	**-47**
Impairment losses			
Impairment losses brought forward	-52	–	**-52**
Impairment losses for the year	-8	-3	**-11**
Divestments/disposals	–	–	**–**
Accumulated impairment losses carried forward	**-60**	**-3**	**-63**
Carrying amount according to plan carried forward	**137**	**33**	**170**

Estimated useful life

Concessions, customer lists and similar rights	1-63 years
Costs to obtain a contract	2-3 years

Estimated useful lives are unchanged compared with the preceding year.

Note 13 Property, plant and equipment

Accounting policy

Property, plant and equipment are reported as assets on the balance sheet if it is likely that there will be future financial benefit for the company and the cost of the asset can be calculated in a reliable manner. Cost includes the purchase price and costs directly attributable to putting the asset in place and in a suitable condition for use in accordance with the management's intention of the acquisition. Examples of directly attributable expenses included in cost are delivery and handling, installation, land registration and consulting services. Borrowing costs directly attributable to investment projects in property, plant and equipment, which take a substantial period of time to complete, are included in the cost of the asset during the construction period.

Subsequent costs

Subsequent costs for property, plant and equipment are only added to the acquisition cost if it is likely that there will be future financial benefits associated with the asset for the company and the cost can be calculated in a reliable manner. All other subsequent costs are reported as expenses in the period when they arise. What is decisive for the assessment when a subsequent cost is added to the acquisition cost is whether the cost concerns the replacement of identified components, or parts of them, whereby such costs are capitalised. Also, in cases where new components are created, the cost is added to the cost of the asset. Any undepreciated reported values of replaced components, or parts of components, are retired and carried as an expense in connection with the replacement. Repairs and maintenance are expensed as incurred.

Depreciation principles

Depreciation is reported on a straight-line basis in the income statement over the estimated useful life of the asset. The Company applies component depreciation, which means that the components' estimated useful life provides the basis for the straight-line depreciation. Estimated useful life is described below in this note. Assessments of the residual value and useful life of an asset are conducted annually. Land and water rights are not subject to depreciation.

Important estimations and assessments

Property, plant and equipment are tested for impairment in accordance with the accounting policies described in Note 6 to the consolidated accounts, Impairment losses and reversed impairment losses. The recoverable amount for cash-generating units is determined by calculating the value in use or fair value less costs to sell. For these calculations, certain estimations must be made regarding future cash flows along with other adequate assumptions regarding the required rate of return, for example.

Estimated useful life

Hydro power installations	5-40 years
Combined heat and power installations	5-40 years
Wind power installations	10-25 years
Solar power installations	5-25 years
Office and warehouse buildings and workshops	25-50 years
Office equipment	5-10 years

Estimated useful lives are unchanged compared with the preceding year.

Financial information

	2019				
	Land and buildings[1]	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress	Total
Cost					
Cost brought forward[2]	61	5,084	521	196	**5,862**
Adoption of new accounting standard (IFRS 16)	50	–	49	–	**99**
Acquired companies	1	–	9	1	**11**
Investments[3]	1	10	10	303	**324**
Capitalised/reversed future expenses for decommissioning, restoration	2	9	–	–	**11**
Transfer from construction in progress	2	103	4	-109	**–**
Divestments/disposals	-4	-4	-60	–	**-68**
Assets held for sale	–	-41	–	–	**-41**
Divested companies	–	–	–	–	**–**
Accumulated cost carried forward	**113**	**5,161**	**533**	**391**	**6,198**
Depreciation according to plan					
Depreciation brought forward	-19	-1,427	-338	–	**-1,784**
Acquired companies	–	–	-5	–	**-5**
Depreciation for the year	-11	-120	-40	–	**-171**
Divestments/disposals	–	1	57	–	**58**
Assets held for sale	–	27	–	–	**27**
Divested companies	–	–	–	–	**–**
Accumulated depreciation according to plan carried forward	**-30**	**-1,519**	**-326**	**–**	**-1,875**
Impairment losses					
Impairment losses brought forward	-14	-2,146	-30	–	**-2,190**
Impairment losses for the year	–	-60	-8	–	**-68**
Assets held for sale	–	11	–	–	**11**
Accumulated impairment losses carried forward	**-14**	**-2,195**	**-38**	**–**	**-2,247**
Carrying amount according to plan carried forward	**69**	**1,447**	**169**	**391**	**2,076**

	2018				
	Land and buildings[1]	Plant and machinery and other technical installations	Equipment, tools, fixtures and fittings	Construction in progress	Total
Cost					
Cost brought forward[2]	54	5,455	523	118	**6,150**
Adoption of new accounting standard (IFRS 16)	–	–	–	–	**–**
Acquired companies	–	–	–	–	**–**
Investments[3]	1	10	-6	191	**196**
Capitalised/reversed future expenses for decommissioning, restoration	6	2	–	–	**8**
Transfer from construction in progress	–	94	16	-110	**–**
Divestments/disposals	–	-11	-12	–	**-23**
Assets held for sale	–	–	–	–	**–**
Divested companies	–	-466	–	-3	**-469**
Accumulated cost carried forward	**61**	**5,084**	**521**	**196**	**5,862**
Depreciation according to plan					
Depreciation brought forward	-17	-1,362	-329	–	**-1,708**
Acquired companies	–	–	–	–	**–**
Depreciation for the year	-2	-133	-17	–	**-152**
Divestments/disposals	–	7	8	–	**15**
Assets held for sale	–	–	–	–	**–**
Divested companies	–	61	–	–	**61**
Accumulated depreciation according to plan carried forward	**-19**	**-1,427**	**-338**	**–**	**-1,784**
Impairment losses					
Impairment losses brought forward	-14	-2,146	-30	–	**-2,190**
Impairment losses for the year	–	–	–	–	**–**
Assets held for sale	–	–	–	–	**–**
Accumulated impairment losses carried forward	**-14**	**-2,146**	**-30**	**–**	**-2,190**
Carrying amount according to plan carried forward	**28**	**1,511**	**153**	**196**	**1,888**

1) Cost for land and buildings includes cost of land rights amounting to EUR 1 million (1), which are not subject to depreciation.
2) Government grants received, balance brought forward, amount to EUR 66 million (65).
3) Government grants received during the year amounted to EUR -1 million (2).

Note 14 Shares and participations owned by Vattenfall NV and other group companies

The following list includes the significant subsidiaries, associated companies and joint ventures and the share that Vattenfall NV holds in these entities.

Shares and participations owned by Vattenfall NV

	Registered office	Participation in % 2019	Participation in % 2018
Netherlands			
Vattenfall Energy Sourcing Netherlands N.V.[1]	Amsterdam	100	100
Vattenfall Power Generation Netherlands B.V.[1]	Amsterdam	100	100
Nuon Storage B.V.	Amsterdam	100	100
Vattenfall Duurzame Energie N.V.[1]	Amsterdam	100	100
Vattenfall Wind Development Netherlands B.V.[1]	Amsterdam	100	100
Vattenfall Windpark Wieringermeer B.V.	Amsterdam	100	100
Vattenfall Windpark Wieringermeer EXT B.V.	Amsterdam	100	100
Vattenfall Customers & Solutions Netherlands N.V.[1]	Amsterdam	100	100
Vattenfall Eemshaven B.V.[1]	Amsterdam	100	100
Vattenfall Energy Trading Netherlands N.V.[1]	Amsterdam	100	100
Vattenfall Warmte N.V.[1]	Amsterdam	100	100
Vattenfall Sales Nederland N.V.[1]	Amsterdam	100	100
Ingenieursbureau Ebatech B.V.[1]	Amsterdam	100	100
Vattenfall Klantenservice N.V.[1]	Arnhem	100	100
Nuon Epe Gas Service B.V.[1]	Amsterdam	100	100
Feenstra N.V.[1]	Amsterdam	100	100
Feenstra Veiligheid B.V.[1]	Amsterdam	100	100
Feenstra Verwarming B.V.[1]	Lelystad	100	100
Zuidlob Wind B.V.[1]	Amsterdam	100	100
powerpeers B.V.[1]	Amsterdam	100	100
Vattenfall Samen in Zon B.V.	Amsterdam	100	100
Vattenfall Hollandse Kust Zuid 1&2 C.V.	Amsterdam	100	100
Vattenfall Hollandse Kust Zuid 3&4 C.V.	Amsterdam	100	100
Senfal B.V.	Amsterdam	100	-
Delta Energie B.V.[1]	Middelburg	100	-
Windpark Slufterdam West B.V.[1]	Amsterdam	100	100
V.O.F. Omgevingsvergunning Windpark Slufterdam	Rotterdam	50	50
Germany			
Nuon Epe Gasspeicher GmbH	Heinsberg	100	100

1) Vattenfall NV has issued a declaration of liability for these subsidiaries. A complete list of subsidiaries, associated companies and joint ventures, as required by sections 379 and 414 of Book 2 Title 9 of the Dutch Civil Code, is filed with the Chamber of Commerce in Amsterdam.

Note 15 Participations in associated companies and joint ventures

Shares and participations owned by the Company or by other group companies

	Registered office	Participation in % 2019	Carrying amount 2019	Carrying amount 2018
Associated companies and joint ventures owned by Vattenfall NV				
Netherlands				
B.V. Nederlands Elektriciteit Administratiekantoor	Amsterdam	23	7	7
NoordzeeWind C.V.	IJmuiden	50	4	8
Westpoort Warmte B.V.	Amsterdam	50	14	10
Other associated companies and joint ventures			3	6
Total			**28**	**31**

The activities of the joint ventures and associated companies mainly relate to the construction and operation of wind farms and heat grids. The joint ventures and associated companies have no other significant contingent liabilities or commitments as at 31 December 2019 and 2018, except for those disclosed in Note 30.

Vattenfall has issued a series of loans to Westpoort Warmte B.V., totaling EUR 46 million (46) against an average interest rate of 1.8% (1.6%).

Participations in the results of associated companies

	2019	2018
Netherlands		
B.V. Nederlands Elektriciteit Administratiekantoor	1	-1
NoordzeeWind C.V.	-4	-4
Westpoort Warmte B.V.	4	3
Other associated companies and joint ventures	1	1
Total	**2**	**-1**

These joint ventures and associated companies cannot distribute their profits without the consent of the other investors in the relevant joint venture or associated company.

Note 16 Inventories

Accounting policy

Inventories (except for inventories held for trading) are valued at the lower of their cost and net realisable value. Net realisable value is the estimated sales price in operating activities, less estimated costs for completion and to bring about a sale. The cost of inventories is calculated, depending on the type of inventory, either through application of the first-in, first-out (FIFO) method or through the application of a method based on average prices. Both methods include costs that arose on acquisition of the inventory assets.

Inventories held for trading are valued at fair value less costs to sell. For CO_2 emission allowances that are held for trading, fair value is based on quoted prices (Level 1). For other commodities fair value measurement is derived from an observable market price (API#2 for coal), which means a categorisation into Level 2 of the fair value hierarchy. See Note 3 to the consolidated accounts, Accounting policies.

Financial information

	2019	2018
Inventories held for own use		
Materials and spare parts	27	26
Other	3	2
Total	**30**	**28**
Inventories held for trading		
Fossil fuel	42	94
CO_2 emission allowances/certificates	4	3
Biomass	9	5
Total	**55**	**102**
Total inventories	**85**	**130**

Note 17 Trade receivables and other receivables

Accounting policy

Trade receivables and other receivables are initially measured at fair value and subsequently at amortised cost. For trade receivables calculation of the loss reserve is based on expected credit losses for the remaining term. A collective method is used where the receivables are grouped together per business line based on e.g., the number of days past due including any past-due receivables, and a credit loss percentage is calculated for the respective intervals, where in the model Vattenfall NV has based its calculations on experience from historic loss levels for receivables with similar credit risk characteristics while taking into account forward-looking macroeconomic conditions that may affect expected cash flows. For individual significant receivables, an individual assessment may be made. The allowance for expected credit losses of trade receivables is reported in operating expenses. Vattenfall NV evaluates the concentration of risk with respect to trade receivables as low, as its customers are located in all Dutch regions and, in case of businesses, operate in several industries in largely independent markets.

Financial information

	2019	2018
Accounts receivable - trade	357	349
Receivables from related companies	873	1,948
Other receivables	15	21
Total	**1,245**	**2,318**

Note that that due to the homogeneous nature of B2C balances, debit as well as credit balances are summed into one AR position.

Age analysis

The collection period is normally between 10 and 30 days.

	2019			2018		
	Receivables, gross	Impaired receivables	Receivables, net	Receivables, gross	Impaired receivables	Receivables, net
Accounts receivable - trade						
Not due	277	1	**276**	288	1	**287**
Past due 1-30 days	41	1	**40**	33	1	**32**
Past due 31-90 days	15	1	**14**	13	1	**12**
Past due >90 days	44	17	**27**	34	16	**18**
Total	**377**	**20**	**357**	**368**	**19**	**349**

Note 18 Advance payments paid

	2019	2018
Margin calls paid, energy trading	1	8
Total	**1**	**8**

A margin call paid is a marginal security (collateral) that Vattenfall NV pays its counterparty as the holder of a derivative position to cover the counterpart's credit risk, either bilaterally via OTC or through an exchange. In Vattenfall NV's business activities, margin calls occur in energy trading and in the financing operations.

Note 19 Prepaid expenses and accrued income

	2019	2018
Prepaid expenses and accrued income, electricity	181	100
Prepaid expenses, other	6	5
Accrued income, other	5	2
Total	**192**	**107**

Note 20 Cash and cash equivalents

	2019	2018
Cash and bank balances	83	45
Total	**83**	**45**

Note 21 Interest-bearing liabilities

Reported values for interest-bearing liabilities are specified as follows:

	Non-current portion maturity 1-5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Other liabilities	58	13	22	14	**80**	**27**	31	2	**111**	**29**
Total interest-bearing liabilities	**58**	**13**	**22**	**14**	**80**	**27**	**31**	**2**	**111**	**29**

Leasing liabilities are part of the other liabilities. The non-current portion amounts to EUR 54 million and the current portion amounts to EUR 29 million. Further reference is made to note 11 Leasing to the consolidated accounts.

Note 22 Pension

Accounting policy

Vattenfall NV's pension obligations are defined contribution plans.

Defined contribution pension plans

Defined contribution pension plans are post-employment benefit plans according to which fixed fees are paid to a separate legal entity. There is no legal or constructive obligation to pay additional fees if the legal entity does not have sufficient assets to pay all benefits to the employees. Fees for defined contribution pension plans are reported as an expense in the income statement in the period they apply to.

Dutch pension plans

Vattenfall NV has various pension and similar plans for its current and former employees. The majority of the pension obligations has been transferred to the ABP pension fund and the 'Metaal en Techniek' pension fund. In addition to these two main pension plans, Vattenfall NV has a small number of defined benefit plans that are in aggregate not material. The ABP and 'Metaal en Techniek' plans are classified and reported as defined contribution plans. The coverage ratio of the ABP pension fund amounts to 97.8% (2018: 103.8%) and the pension premium for 2019 amounts to 24.9% (2018: 21.5%). The coverage ratio of the 'Metaal en Techniek' pension fund amounts to 98.8% (2018: 102.3%) and the pension premium for 2019 amounts to 28.0% (2018: 28.5%).

Note 23 Provisions

Accounting policy

A provision is reported on the balance sheet when the Company has a legal or constructive obligation as a result of a past event and it is probable that an outflow of financial resources will be required to regulate the obligation and a reliable estimate of the amount can be made. Where the effect of the time when payment is made is material, provisions are estimated by discounting the anticipated future cash flow at an interest rate before tax that reflects market estimates of time value of money. The discount rate does not reflect such risks that are taken into consideration in the estimated future cash flow.

Changes in discounted provisions for dismantling, restoration or similar measures, which at the time of acquisition have also been reported as Property, Plant and Equipment, are reported as follows: In cases where the change is due to a change in the estimated outflow of resources or a change in the discount rate, the cost of Property, Plant and Equipment is changed in an amount corresponding to the provision. The periodic change of the present value is recognised as a financial expense.

Provisions are also reported for onerous contracts, that is, where unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract.

Important estimations and assessments

Other provisions

For other types of provisions, such as provisions for future expenses for gas and wind operations and other environmental measures/undertakings, and for personnel-related provisions for non-pension purposes, or other provisions, the following discount rate is used, when discount effect is material: 0.25 % (0.75 %).

Provisions for future expenses for heat and wind operations and other environmental measures/ undertakings

Provisions are made in the Netherlands for the dismantling and removal of assets and restoration of sites where the Company conducts gas operations. Provisions are also made for restoration of sites where the Vattenfall NV conducts wind operations and for environmental measures/ undertakings within other activities carried out by the Company.

Personnel-related provisions for non-pension purposes
Provisions are made for future costs pertaining to:

- Long-term time accounts. This covers the obligation to continue paying all or part of an employee's salary during the first two years of sick leave.
- Jubilee payments. This covers the jubilee benefits paid to employees for every 10 years of service and after retiring upon reaching the retirement age
- Severance payments related to restructuring measures. This covers payments and/or supplements to benefits granted to employees whose employment contract has been terminated. These benefits and supplements are based on the Social Plan operated by Vattenfall NV and individual arrangements (including Voluntary Leave Package).
- Other costs for giving notice to personnel.

Other provisions
Other provisions include, among others, provisions for onerous contracts, restructuring and guarantee commitments.

Financial information

	Non-current portion		Current portion		Total	
	2019	2018	2019	2018	2019	2018
Provisions for future expenses of gas and wind operations and other environmental measures/undertakings	41	30	1	1	**42**	**31**
Personnel-related provisions for non-pension purposes	24	24	12	16	**36**	**40**
Other provisions	19	21	3	3	**22**	**24**
Total	**84**	**75**	**16**	**20**	**100**	**95**

Movement schedule provisions

	Provisions for gas, wind and other environmental measures	Personnel-related provisions for non-pension purposes	Other provisions
Balance brought forward	31	40	24
Provisions for the period	–	9	4
Revaluations	11	–	–
Provisions used	–	-7	-1
Provisions reversed	–	-6	-5
Balance carried forward	**42**	**36**	**22**

Future expenses of non-current provisions
With the current assumptions, provisions are expected to result in outgoing payments as shown below:

	Provision for gas and wind operations	Personnel-related provision	Other provisions	Total
2-5 years	5	16	6	**27**
6-10 years	4	8	13	**25**
11-20 years	8	–	–	**8**
Beyond 20 years	24	–	–	**24**
Total	**41**	**24**	**19**	**84**

Note 24 Trade payables and other liabilities

	2019	2018
Accounts payable-trade	212	225
Liabilities to related companies	580	1.002
Other liabilities	444	399
Total	**1,236**	**1,626**

Note 25 Advance payments received

	2019	2018
Margin calls received, energy trading	–	4
Other advance payments	6	–
Total	**6**	**4**

A margin call received is marginal security (collateral) that Vattenfall NV's counterparty pays to Vattenfall NV as the holder of a derivative position to cover Vattenfall NV's credit risk, either bilaterally via OTC or through an exchange. In Vattenfall NV's business activities, margin calls occur in energy trading and in the treasury operations.

Margin calls received within energy trading are recognised on the balance sheet as Advance payments received and are thereby recognised in the statement of cash flows as cash flows from changes in operating liabilities while margin calls received within financing activities are recognised on the balance sheet as Current interest-bearing liabilities (Note 21 to the consolidated accounts, Interest-bearing liabilities) and are thereby recognised in the statement of cash flows as cash flows from financing activities.

Note 26 Accrued expenses and deferred income

	2019	2018
Accrued personnel-related costs	55	43
Accrued expenses, CO_2 emission allowances	174	102
Other accrued expenses	11	10
Deferred income and accrued expenses, electricity	179	143
Other deferred income	81	7
Total	**500**	**305**

Note 27 Financial instruments by measurement category, offsetting of financial assets and liabilities, and financial instruments' effects on income

Accounting policy

Classification and measurement

Financial assets

Financial assets are classified in various categories based in part on the objective (the business model) of holding the financial asset, and in part on the financial instrument's contractual cash flows, in the event they consist only of principal amounts and interest. The classification is determined at the original point of acquisition. Settlement day accounting is applied for spot purchases and spot sales of financial assets.

Amortised cost

Financial assets (debt instruments) are classified in this category if they are held in a business model whose objective is to hold financial assets in order to collect their contractual cash flows, and if the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. These instruments are measured at amortised cost, where the reported gross value is adjusted for expected credit losses. For Vattenfall NV this category includes Other non-current receivables, Trade receivables and other receivables, Advance payments paid, and Cash and bank balances.

Fair value through profit or loss

This category includes all of Vattenfall NV's financial assets (debt instruments) that are not measured at amortised cost. This includes assets held for trading, which entails that the objective is that they will be sold in the near term, and assets that Vattenfall NV is monitoring and measuring based on fair value. Debt instruments are also classified in this category if the contractual terms do not consist solely of payments of principal and interest.

Derivative assets are measured at fair value through profit or loss. The assets in this category are remeasured on a regular basis to fair value with changes in value reported in profit or loss.

Financial liabilities

Financial liabilities at fair value through profit or loss

Derivative liabilities are always classified in this category. These financial liabilities are measured at fair value with changes in value recognised in profit or loss.

Other financial liabilities

In this category, interest-bearing and noninterest-bearing financial liabilities that are not held for trading purposes are reported. Other financial liabilities are measured at amortised cost. Trade liabilities have a short anticipated term and are therefore valued at a nominal amount without discounting.

Impairment

Impairment of financial assets is based on models for expected credit losses. For trade receivables that do not include a significant financing component, a simplified method is used, where calculation of the loss reserve is based on expected credit losses for the remaining term. A collective method is used where the receivables are grouped together per business line based on e.g., the number of days past due including any past-due receivables, and a credit loss percentage is calculated for the respective intervals, where in the model Vattenfall NV has based its calculations on experience from historic loss levels for receivables with similar credit risk characteristics while taking into account forward-looking macro-economic conditions that may affect expected cash flows. For individual significant receivables, an individual assessment may be made. The allowance for expected credit losses of trade receivables is reported in operating expenses. Vattenfall NV evaluates the concentration of risk with respect to trade receivables as low, as its customers are located in all Dutch regions and, in case of businesses, operate in several industries in largely independent markets.

For other financial assets where the policies for impairment are applied, a loss reserve is reported that corresponds to 12 months' expected credit losses at initial recognition. If the credit risk increases significantly since initial recognition, a reserve corresponding to expected credit losses during the entire term is reported. Vattenfall NV presumes that the credit risk has not increased significantly if the instrument has a low credit risk on the balance sheet date, such as instruments with an investment grade rating. The credit risk is considered to have increased significantly if the counterparty's rating has been lowered to a lower rating than investment grade or, alternatively, if the counterparty already had a lower credit rating than investment grade at initial recognition and this rating was significantly lowered further. Expected credit losses are calculated by assessing the probability of default, the loss given default and the exposure at default.

Financial information

Risks arising from financial instruments are described in Note 28 Financial Risks of the consolidated accounts.

Financial instruments by measurement category

Presented below are assets and liabilities where the carrying amount differs from the fair value.

	2019		2018	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets at amortised cost				
Other non-current receivables	47	51	41	44
Financial liabilities at amortised cost				
Other non-current interest-bearing liabilities	80	88	27	36

Offsetting financial assets and financial liabilities

Presented below are financial assets and liabilities that are subject to enforceable master netting arrangements and similar agreements.

Assets 31 December 2019

				Related amounts not set off on the balance sheet		
	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Financial liabilities, not intended to be settled net[1]	Cash collateral received	Net amount
Derivatives, commodity contracts	578	564	14	–	–	14
Total	**578**	**564**	**14**	**–**	**–**	**14**
Derivatives, not subject to offsetting	188	–	188	–	–	188
Total derivative assets			**202**			**202**

Assets 31 December 2018

				Related amounts not set off on the balance sheet		
	Gross amounts of recognised financial assets	Gross amounts of recognised financial liabilities set off on the balance sheet	Net amounts of financial assets presented on the balance sheet	Financial liabilities, not intended to be settled net[1]	Cash collateral received	Net amount
Derivatives, commodity contracts	2,333	1,967	366	–	5	361
Total	**2,333**	**1,967**	**366**	**–**	**5**	**361**
Derivatives, not subject to offsetting	85	–	85	–	–	85
Total derivative assets			**451**			**446**

Net amounts of financial assets presented on the balance sheet with related parties amount to EUR 5 million (291) as of 31 December 2019.

Liabilities 31 December 2019

	Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Related amounts not set off on the balance sheet: Financial assets, not intended to be settled net[1]	Related amounts not set off on the balance sheet: Cash collateral pledged	Net amount
Derivatives, commodity contracts	747	564	183	–	–	183
Total	**747**	**564**	**183**	**–**	**–**	**183**
Derivatives, not subject to offsetting	61	–	61	–	–	61
Total derivative liabilities			**244**			**244**

Liabilities 31 December 2018

	Gross amounts of recognised financial liabilities	Gross amounts of recognised financial assets set off on the balance sheet	Net amounts of financial liabilities presented on the balance sheet	Related amounts not set off on the balance sheet: Financial assets, not intended to be settled net[1]	Related amounts not set off on the balance sheet: Cash collateral pledged	Net amount
Derivatives, commodity contracts	1,989	1,967	22	–	8	14
Total	**1,989**	**1,967**	**22**	**–**	**8**	**14**
Derivatives, not subject to offsetting	23	–	23	–	–	23
Total derivative liabilities			**45**			**37**

1) These items cannot be settled net as each transaction has a unique due date and they were not entered into with the purpose to be settled net. Settlement can be entailed only in case of default and only and when it is intented to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

Net amounts of financial liabilities presented on the balance sheet with related parties amount to EUR 179 million (8) as of 31 December 2019.

Financial assets and liabilities that are measured at fair value on the balance sheet at 31 December 2019

	Level 1	Level 2	Level 3	Total
Assets				
Derivative assets	–	156	46	**202**
Total assets	**–**	**156**	**46**	**202**
Liabilities				
Derivative liabilities	–	244	–	**244**
Total liabilities	**–**	**244**	**–**	**244**

Financial assets and liabilities that are measured at fair value on the balance sheet at 31 December 2018

	Level 1	Level 2	Level 3	Total
Assets				
Derivative assets	–	451	–	**451**
Total assets	**–**	**451**	**–**	**451**
Liabilities				
Derivative liabilities	–	40	5	**45**
Total liabilities	**–**	**40**	**5**	**45**

Sensitivity analysis for Level 3 contracts

For the determination of fair value of financial instruments, Vattenfall NV strives to use valuation techniques that maximise the use of observable market data where it is available and rely as little as possible on entity-specific estimates.

Entity-specific estimates are based on internal valuation models that are subject to a defined process of validation, approval and monitoring. In the first step the model is designed by the business. The valuation model and calibration of the valuation model is then independently reviewed and approved by Vattenfall NV's risk organisation. If deemed necessary, adjustments are required and implemented. Afterwards, Vattenfall NV's risk organisation continuously monitors whether the application of the method is still appropriate. This is made by usage of several back-testing tools. In order to reduce valuation risks, the application of the model can be restricted to a limited scope.

Vattenfall NV's Level 3 contracts consist of CDM and virtual gas storage contracts. The net value as per 31 December 2019 has been calculated at EUR 46.1 million (-4.6) and is most sensitive to the optionality volatility. A change in the value of the daily volatility of +/-5% would affect the total value by approximately +/- EUR 2.5 million (+/-3.8).

Derivative assets

	Non-current portion maturity 1-5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Commodity and commodity-related contracts	12	98	–	–	**12**	**98**	190	353	**202**	**451**
Total	**12**	**98**	**–**	**–**	**12**	**98**	**190**	**353**	**202**	**451**

Derivative liabilities

	Non-current portion maturity 1-5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Commodity and commodity-related contracts	34	6	–	–	**34**	**6**	210	39	**244**	**45**
Total	**34**	**6**	**–**	**–**	**34**	**6**	**210**	**39**	**244**	**45**

Note 28 Financial risks

The following risks can be identified with respect to financial instruments: market risk, credit risk and liquidity risk. These risks are managed on a Vattenfall AB level. Vattenfall AB's risk management to the extent to which it is relevant for Vattenfall NV are summarised below.

Market risk – commodities including electricity

Market risk for electricity and commodities refers to the risk of Vattenfall failing to achieve its financial targets as a result of an adverse change in commodity prices. Vattenfall AB's price hedging strategy is focused on the Nordic generation assets. Vattenfall NV does not apply hedge accounting for new transactions in its consolidated account, since 2017.

Risk management activities

Through our asset ownership and sales activities we are exposed to electricity, fuel, and CO_2 emission allowance prices, which are affected by several fundamental factors, such as the global macroeconomic situation, local supply, demand, and political decisions. We are active in the wholesale trading market to hedge our electricity position and fuel requirements through physical and financial forward contracts and long-term customer contracts. These contracts pertain to time horizons in which there is no possibility to hedge prices in the liquid part of the futures market, and stretch as far as 2026. Most volumes are hedged at the beginning of this time horizon, with falling volumes towards the end. The Vattenfall Risk Committee (VRC) decides how much generation is to be hedged within the mandates issued by the Board of Directors. To measure electricity price risk, we use methods such as Value at Risk (VaR) and Gross Margin at Risk along with various stress tests. With the current portfolio structure, the dominant risk exposure is now coupled to Nordic nuclear and hydro power baseload generation. In addition, Vattenfall's continuing operations generate a higher share of regulated revenue from distribution, heat and tendered wind power, which reduces the total risk exposure on the Continent (Germany, the Netherlands as well as the UK). Vattenfall continues to have some price exposure between electricity and used fuel/emissions on the Continent. Such an exposure has a lower risk profile than the outright power exposure in the Nordic countries. The market price risk of Vattenfall's production assets and hedges for electricity, fuel prices and emissions as well as the ancillary trading market price risks are monitored daily.

VaR levels

VaR calculation quantifies potential changes in the value of commodity positions as a result of market price movements. The inputs to the VaR calculation are positions (open volumes), current market prices and the variability of prices (volatilities and correlations), all of which are updated daily. The risk limits are designed to prevent maximum loss to exceed SEK 2.5 billion (approximately EUR 239 million), which can be compared to a VaR of EUR 25 million (26), with a 99% confidence level and a 1-day holding period. Thus, the VaR measures the marked-to-market movement arising from a 1-day change in market prices, under normal market conditions, which should only be exceeded 1% of the time. The VaR levels for Vattenfall NV amount to EUR 1.4 million (1.6).

Ancillary trading

In addition to commodity market risk resulting from our assets and sales activities, Vattenfall AB's Board of Directors has given the CEO a risk mandate to allow discretionary risk-taking and trading in the wholesale market. Most of our risk exposure in the ancillary trading portfolio is based on market prices (mark-to-market). In cases where market prices cannot be observed, modelled prices are used (mark-to-model). Mark-to-model positions arise mainly in asset- and sales-related portfolios, see Note 27 to the consolidated accounts, Financial instruments. Management of such valuation models is strictly regulated, and approval is required from the risk organisation before they may be used.

Volume risk

Volume risk pertains to the risk for deviations between anticipated and actual delivered volume.

Risk management activities

District heating volumes are managed by improving and developing forecasts for heat consumption. There is a correlation between electricity prices and generated electricity volume. Volume risk also arises in the sales activities as deviations in the anticipated volumes against actual volumes delivered to customers. Here, too, improved monitoring and forecasting capabilities are the most efficient risk management instruments.

Liquidity risk

Liquidity risk refers to the risk of Vattenfall not being able to finance its capital needs and arises if asset values at maturity do not match those of liabilities and other derivatives.

Risk management activities

Access to capital and flexible financing solutions are ensured through several types of debt issuance programs and credit facilities on the level of Vattenfall AB. Vattenfall AB has a defined target for its short-term accessibility to capital. The goal is that funds corresponding to no less than 10% of the consolidated net sales, or the equivalent of 90 days' stressed liquidity needs of the business (whichever is higher) shall be available. As per 31 December 2019, available liquid assets and/or committed credit facilities amounted to 30% (28%) of consolidated net sales. Vattenfall AB is committed to maintaining financial stability, which is reflected in the company's long-term targets for capital structure. On 8 November 2018 Standard & Poor's affirmed Vattenfall AB's long-term BBB+ rating and short-term A-2 rating. On 4 June 2019 Moody's affirmed Vattenfall AB's long-term A3 rating and Baa2 rating for hybrid bonds. The outlook for Vattenfall AB's rating was revised from negative to stable by Standard & Poor's in 2017, down to negative by Moody's in 2019. Vattenfall has no imminent refinancing need and may possibly approach the market in the second half of 2020.

Contractual cash flows

Vattenfall NV is financed via internal loans and credit facilities. To provide insight into the liquidity risk, the following table shows the contractual terms of the financial obligations (translated at the reporting date rate), including interest payments. The contractual cash flows of non-current assets as well as current assets combined with the internal loans and credit facilities available at Vattenfall AB cover the current need for liquidity as included in the table. The total facilities available at Vattenfall AB amount to EUR 500 million, of which none was utilised.

	Non-current portion maturity 1-5 years		Non-current portion maturity >5 years		Total non-current portion		Current portion		Total	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Interest-bearing liabilities	57	13	27	17	**84**	**30**	32	3	**116**	**33**
Derivatives	597	513	–	–	**597**	**513**	870	775	**1,467**	**1,288**
Trade payables and other financial liabilities	–	–	–	–	**–**	**–**	1,236	1,626	**1,236**	**1,626**
Total	**654**	**526**	**27**	**17**	**681**	**543**	**2,138**	**2,404**	**2,819**	**2,947**

Interest rate risk
Interest rate risk refers to the negative impact of changed interest rates on Vattenfall's income statement and cash flow.

Risk management activities
We quantify interest rate risk in our debt portfolio in terms of duration, which describes the average term of fixed interest. The norm duration is based on Vattenfall AB's current financing need and desired interest rate sensitivity in net interest income/expense. Duration is to have a norm of five years with a permissible variation of +2/–1 year. The duration of Vattenfall AB's debt portfolio at year-end was 4.67 years (4.31) including Hybrid Capital.

Sensitivity analysis in relation to cash flows for variable interest assets and liabilities
Vattenfall NV is exposed to interest rate risk on its interest-bearing liabilities, see Note 21. A change of 100 basis points in the interest rates as at 31 December 2019 would, assuming all other circumstances remain unchanged, have a pre-tax effect on Vattenfall NV's equity and financial income and expenses of EUR 0 million (0) on an annual basis.

Currency risk
Currency risk refers to the negative impact of changed exchange rates on Vattenfall's income statement and balance sheet.

Risk management activities
Vattenfall AB is exposed to currency risk through exchange rate movements attributable to future cash flows (transaction exposure). Currency exposure in borrowing is limited by using currency exchange rate swaps. We strive for an even maturity structure for derivatives. Derivative assets and derivative liabilities are reported in Note 27 to the consolidated accounts, Derivative assets and derivative liabilities. We have limited transaction exposure, since most generation, distribution and sales of electricity take place in the respective local markets. Sensitivity to currency movements is therefore relatively low. All transaction exposure that exceeds a nominal value equivalent to SEK 10 million is to be hedged immediately when it arises. The target for hedging translation exposure is to, over time, match the currency composition in the debt portfolio with the currency composition of Vattenfall AB's funds from operations (FFO).

Sensitivity analysis in relation to currency risk
Vattenfall NV's exposure to significant currency risks based on nominal values amount to EUR 20 million (32). This exposure is reduced by derivatives concluded to hedge the currency risk for an amount of EUR 17 million (38). The pre-tax effect that a possible increase or decrease in the value of foreign currencies relative to the euro would have, assuming all other circumstances remain unchanged, on Vattenfall NV's financial income and expenses and equity, taking into account the derivatives, amount to EUR 0.3 million (0.7).

Credit risk
Credit risk can arise if a counterparty cannot or fails to meet its obligations and exists in all parts of Vattenfall's operations.

Risk management activities
We have a strict framework for governing and reporting credit risks to ensure that risks are monitored, measured and minimised so that the total credit exposure is kept within Vattenfall AB's risk appetite. The company's credit risk management involves the analysis of its counterparties, reporting of credit risk exposures, contract negotiations and proposals for risk mitigation measures (e.g., obtaining collateral).

Note 29 Specifications of equity

Authorised, issued and paid-up share capital
The authorised share capital of Vattenfall NV amounts to EUR 1,500,000,000 consisting of 300,000,000 shares, with a nominal value of EUR 5 per share. The total number of issued and paid-up shares amounts to 136,794,964 shares totaling a paid-up capital of EUR 683,974,820. All shares are held by Vattenfall AB.

Share premium
Share premium consists of the additional paid-up or contributed value to Vattenfall NV.

Retained earnings including result for the year
Retained earnings including result for the year include results in Vattenfall NV and its subsidiaries, associated companies and joint ventures.

Dividend policy
Vattenfall NV's dividend policy stipulates the following:

- The maximum dividend distribution shall be the net profit, adjusted for significant non-cash fair value movements on financial instruments;
- As a result of the dividend distribution the debt/equity ratio will not exceed 60/40;
- The dividend distribution can only be done to the extent that adequate liquidity lines are available to Vattenfall NV and a sufficiently sustainable cash position is maintained over the next 12 months as proven by the long-term cash forecast of Vattenfall NV.

Note 30 Contingent liabilities

As per 31 December 2019 contingent liabilities amounted to EUR 422 million (274). The contingent liabilities mainly consist of capital expenditure commitments regarding property, plant and equipment and intangible assets. The outstanding capital expenditure commitments, which relate mainly to construction in progress, and other purchasing commitments.

Sales and purchase commitments

Vattenfall NV has concluded a number of long-term purchase contracts with terms varying from 2019 to 2034. In addition, Vattenfall NV has concluded long-term sales contracts on varying terms and conditions. Vattenfall NV enters into energy commodity contracts for the sale and purchase of electricity, oil, gas, coal, biomass and emission allowances. The energy commodity contracts that are held for trading purposes and the energy commodity contracts that are designated as hedging instruments are recognised on the balance sheet at fair value. These contracts are not generally settled by means of physical delivery but by concluding opposite transactions in which only the net cash flows are settled.

Please refer to Note 28 Financial risks for the liquidity overview, which shows the contractual terms of all financial obligations recognised.

Contingent liabilities

At the reporting date, Vattenfall NV (including its subsidiaries, associated companies and joint ventures) was involved in a number of legal proceedings and investigations by tax and other authorities. Provisions have been made as far as deemed necessary in accordance with management's estimate and the accounting principles. Vattenfall NV believes that the ultimate resolution of these claims and proceedings will not, in the aggregate, have a material adverse effect on the Company's financial position, consolidated income or cash flows.

At 31 December 2019, the Company has issued bank guarantees and letters of credits amounting to EUR 1 million (1). Vattenfall NV has provided several parent guarantees for its subsidiaries, joint ventures or associated companies, part of which are uncapped. At 31 December 2019, these parent guarantees amounted to EUR 6 million (3).

Vattenfall NV has issued declarations of joint and several liability pursuant to article 403, Part 9, Book 2 of the Dutch Civil code for a number of its subsidiaries. The significant group companies for which such a declaration has been issued are included in the list of subsidiaries, associated companies and joint ventures included in Note 14 Shares and participations of the consolidated accounts. As partners in a number of general partnerships, subsidiaries of Vattenfall NV are liable for the obligations of these partnerships. The exposure under these obligations is not considered to be significant.

Vattenfall NV and the majority of its subsidiaries form a fiscal unity for both corporate income tax and VAT purposes. Consequently, every legal entity forming part of the fiscal unity is jointly and severally liable for the tax liabilities of the legal entities forming part of the fiscal unity.

Licences

Vattenfall NV has a licence for the supply of electricity, gas and heat and holds licences for constructing certain power and heat facilities.

Note 31 Number of employees and personnel costs

Number of employees during the year, full-time equivalents:

	2019			2018		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**
Netherlands	2,655	903	**3,558**	2,577	822	**3,399**
Germany	17	1	**18**	18	1	**19**
Total	**2,672**	**904**	**3,576**	**2,595**	**823**	**3,418**

Average number of employees at 31 December, full-time equivalents:

	2019			2018		
	Men	**Women**	**Total**	**Men**	**Women**	**Total**
Netherlands	2,669	905	**3,574**	2,596	824	**3,420**
Germany	18	1	**19**	18	1	**19**
Total	**2,687**	**906**	**3,593**	**2,614**	**825**	**3,439**

Personnel costs:

	2019	2018
Salaries and other remuneration	228	220
Social security costs	37	32
Pension costs	31	29
Total	**296**	**281**

Benefits for Management and Supervisory Board members of Vattenfall NV

	2019			2018		
Amounts in EUR thousands	**Directors' fees and base salary including vacation pay**	**Other remuner-ation and benefits**	**Pension and severance costs**	**Directors' fees and base salary including vacation pay**	**Other remuner-ation and benefits**	**Pension and severance costs**
Management Board	1,295	146	702	1,538	–	33
Supervisory Board	17	–	–	17	–	–
Total	**1,312**	**146**	**702**	**1,555**	**–**	**33**

Note 32 Related party disclosures

As of 1 July 2015, 100% of Vattenfall NV's shares are owned by Vattenfall AB. Vattenfall AB has a casting vote in the Supervisory Board and qualifies as a related party. Vattenfall NV also conducts transactions with subsidiaries of Vattenfall AB. Furthermore, Vattenfall NV and its subsidiaries have interests in various associated companies and joint ventures over which it exercises significant influence, but no control or only joint control of the operations and financial policy. Transactions with the parties classified as related parties are conducted at market conditions and prices that are not more favourable than the conditions and prices offered to independent third parties.

Disclosures of transactions with key persons in executive positions in the company are shown in Note 42 to the Consolidated accounts, Number of employees and personnel costs.
The following transactions have taken place with related parties with regard to sales and purchases of goods and services, including leases.

	2019	2018
Sales of goods and services to Vattenfall AB and its subsidiaries	38	43
Sales of goods and services to associated companies and joint ventures	32	32
Costs charged by Vattenfall AB and its subsidiaries	-49	-52
Costs charged by associated companies and joint ventures	-3	-3

Various goods and services are bought or provided on normal commercial terms and conditions within Vattenfall AB. A cost-sharing program is in place, which entails that certain costs within the group are recharged to the users within Vattenfall AB based on actual usage. Vattenfall NV, in the ordinary course of business, trades commodities with and via Vattenfall Energy Trading Germany (VET Germany). In the ordinary course of business, Vattenfall NV has outstanding payables and receivables with Vattenfall AB and its subsidiaries (refer to Note 17, Note 21 and Note 24) as well as with its associated companies and joint ventures (Note 15). Vattenfall NV has also granted a limited number of loans to related parties. Where relevant, this has been disclosed in these consolidated accounts.
The members of the management board and supervisory board of Vattenfall NV have been identified as individuals who qualify as related parties. The employee benefits related to these individuals have been disclosed in Note 31.

Note 33 Events after the balance sheet date

The world has drastically changed due to the Covid-19 pandemic, affecting the whole world, with a lock-down in Europe and more pressure on the industry. We are proud of all our employees who are working hard every day to ensure the continuation of stable delivery of electricty, gas and heat to our customers. They show a fighting spirit to keep making this possible despite the challenging time. We have taken measures to reduce the risks of the virus for our employees. Who can work from home has to stay home and we support them in various ways. We are following all instruction from the Government and we implemented protocols and measures to mitigate the risk for our employees that can not work from home as they work in vital processes or at the sites of our clients. Up to the publication of this report we have not seen any major disruptions in our operations.

The virus has impact on the whole economy, affecting both the energy demand from our business consumers and the energy prices. This will have impact on our performance in 2020. We are therefore closely montoring our liquidity situation and taking measures to secure our operations. In light of the current COVID-19 situation and a careful evaluation of our risk-reward balance against the remainder of our strong pipeline and the rest of our ongoing projects, we have decided that we will not participate in the tender for Hollandse Kust Noord and not pay any dividend to our shareholder during the course of 2020 relating to financial year 2019.

Company accounts

Company balance sheet

Amounts in EUR million, before appropriation of result	Note	31 December 2019	31 December 2018
Assets			
Non-current assets			
Property, plant and equipment	2	46	29
Investments in subsidiaries	3	3,060	3,151
Deferred tax assets	5	5	2
Receivables from group companies	4	62	139
Other non-current receivables	5	45	38
Total non-current assets		**3,218**	**3,359**
Current assets			
Trade receivable and other receivables		4	12
Receivables from group companies		2,688	2,806
Cash and cash equivalents	6	51	13
Total current assets		**2,743**	**2,831**
Total assets		**5,961**	**6,190**
Equity and Liabilities			
Equity			
Share capital		684	684
Share premium		2,211	2,797
Legal reserves		230	436
Other reserves		- 879	- 1,132
Unappropriated result for the year		- 214	211
Total equity attributable to Vattenfall NV shareholders	**7**	**2,032**	**2,996**
Provisions	**8**	**37**	**40**
Non-current liabilities			
Interest-bearing liabilities	9	18	-
Non-current liabilities		**18**	**-**
Current liabilities			
Trade payables and other liabilities		150	155
Interest bearing liabilities	9	8	-
Payables to group companies		3,716	2,999
Total current liabilities		**3,874**	**3,154**
Total equity and liabilities		**5,961**	**6,190**

Company income statement

Amounts in EUR million, 1 January - 31 December	Note	2019	2018
Result after taxation from subsidiaries		- 215	209
Other income less expenses after taxation	11	1	2
Result after taxation		**- 214**	**211**

Notes to the company accounts

Note 1 Accounting policies

The company accounts have been prepared in accordance with the provisions of Part 9, Book 2 of the Dutch Civil Code. In the company accounts, Vattenfall NV uses the option provided for in Part 9, Book 2 of the Dutch Civil Code to prepare the company accounts in accordance with the IFRS accounting policies that are used in the preparation of the consolidated accounts. The company income statement is presented in abridged form, as allowed by section 402, Part 9, Book 2 of the Dutch Civil Code. In addition to the accounting policies for the consolidated accounts, specific accounting policies for the company accounts are presented below.

Vattenfall NV applies the exemption provided for by section 382, Part 9, book 2 of the Dutch Civil Code, that the audit fee does not need to be disclosed. The financial figures of Vattenfall NV are consolidated in the annual report of Vattenfall. In the Vattenfall annual report the total audit fee of Vattenfall, including Vattenfall NV, is disclosed.

Investments in subsidiaries

Investments in subsidiaries are valued at net asset value, which is determined on the basis of IFRS accounting policies as used in the consolidated accounts.

Receivables from group companies

Loans and receivables from subsidiaries are stated at amortised cost, less impairment. The company makes use of the option to eliminate intercompany expected credit losses against the investments in subsidiaries.

Note 2 Property, plant and equipment

	2019			
	Land and buildings	**Equipment, tools and fixtures and fittings**	**Construction in progress**	**Total**
Cost				
Cost brought forward	16	222	3	**241**
Adoptation of new accounting standard (IFRS 16)	27	5	-	**32**
Investments	-	1	4	**5**
Transfer from construction in progress	2	3	- 5	**-**
Accumulated cost carried forward	**45**	**231**	**2**	**278**
Depreciation according to plan				
Depreciation brought forward	- 8	- 204	-	**- 212**
Depreciation for the year	- 10	- 10	-	**- 20**
Accumulated depreciation according to plan carried forward	**- 18**	**- 214**	-	**- 232**
Residual value according to plan carried forward	**27**	**17**	**2**	**46**

	2018			
	Land and buildings	**Equipment, tools and fixtures and fittings**	**Construction in progress**	**Total**
Cost				
Cost brought forward	16	207	11	**234**
Investments	-	1	6	**7**
Transfer from construction in progress	-	14	- 14	**-**
Accumulated cost carried forward	**16**	**222**	**3**	**241**
Depreciation according to plan				
Depreciation brought forward	- 6	- 196	-	**- 202**
Depreciation for the year	- 2	- 8	-	**- 10**
Accumulated depreciation according to plan carried forward	**- 8**	**- 204**	-	**- 212**
Residual value according to plan carried forward	**8**	**18**	**3**	**29**

For further disclosure, reference is made to Note 13 to the consolidated accounts, Property, plant and equipment.

Note 3 Investments in subsidiaries

	2019	2018
Balance brought forward	3,151	2,920
New share issues and shareholders' contributions	116	-
Share in result	- 207	209
Share in other comprehensive income	-	22
Balance carried forward	**3,060**	**3,151**

A list of directly and indirectly held participations in subsidiaries is included in Note 15 to the consolidated accounts.

Note 4 Non-current receivables from group companies

	2019	2018
Balance brought forward	139	149
Loans repaid	- 77	- 10
Balance carried forward	**62**	**139**

The effective interest rate on the non-current receivables from group companies was 0.2% (2018: 0.2%).

Note 5 Deferred tax assets and other non-current receivables

	Deferred tax assets	Other non-current receivables	Total
Balance brought forward	2	38	**40**
Loans granted	-	17	**17**
Loans and interest repaid	-	- 10	**- 10**
Temporary differences charged to profit or loss	3	-	**3**
Balance carried forward	**5**	**45**	**50**

	2018		
	Deferred tax assets	Other non-current receivables	Total
Balance brought forward	4	43	**47**
Loans granted	-	-	**-**
Loans repaid	-	- 5	**- 5**
Temporary differences charged to profit or loss	- 2	-	**- 2**
Balance carried forward	**2**	**38**	**40**

Other non-current receivables consist of loans and receivables (including incremental costs) with related parties.

Note 6 Cash and cash equivalents

There were no restricted cash and cash equivalents at the end of 2019 and 2018.

Note 7 Equity

The Consolidated statement of changes in equity and disclosures to that statement are included in the Consolidated accounts. In addition to the Consolidated statement of changes in equity, a non-distributable legal reserve, in the form of a revaluation reserve, is recognised for unrealised fair value gains on financial instruments that are recognised in income, and for which no frequent market quotations are available (Level 2 and Level 3 financial instruments). With regard to Vattenfall NV, this relates to energy commodity contracts for oil, gas, coal, electricity, biomass and emission allowances that are not traded through recognised exchanges (e.g. Amsterdam Power Exchange, Endex), known as over-the-counter or OTC contracts. A legal reserve of EUR 202 million is held for the unrealised fair value movements of these contracts (2018: EUR 405 million).

In addition, a legal reserve participations of EUR 28 million (2018: EUR 31 million) is recognised. The legal reserve participations includes the increases in net asset value of joint ventures and associates since their first inclusion, less any amount that can be distributed without legal restrictions.

The Legal reserve is not freely distributable.

Note 8 Provisions

	2019	2018
Balance brought forward	**40**	**46**
Reversed provisions	- 5	- 11
Provisions for the period	9	16
Provisions used	- 7	- 11
Balance carried forward	**37**	**40**
Current portion	13	16
Non-current portion	24	24

The provisions relates to personnel-related provisions for non-pension purposes and other provisions,

Personnel-related provisions for non-pension purposes
Provisions are made for future costs pertaining to:

- Long-term time accounts. This covers the obligation to continue paying all or part of an employee's salary during the first two years of sick leave.
- Jubilee payments. This covers the jubilee benefits paid to employees for every 10 years of service and after retiring upon reaching the retirement age.
- Severance payments related to restructuring measures. This covers payments and/or supplements to benefits granted to employees whose employment contract has been terminated. These benefits and supplements are based on the Social Plan operated by Vattenfall NV and individual arrangements (including Voluntary Leave Package).
- Other costs for giving notice to personnel.

Other provisions
Other provisions include provisions for restructuring.

Note 9 Interest-bearing liabilities

The maturity of interest-bearing liabilities can be specified as follows:

	Short-term part		Long-term part	
	2019	2018	2019	2018
Leasing liabilities	8	-	18	-
Total	**8**	**-**	**18**	**-**

Note 10 Contingent liabilities

Reference is made to Note 30 to the consolidated accounts, Contingent liabilities.

Note 11 Other income less expenses after taxation

Other income less expenses after taxation was EUR 1 million postive (2018: EUR 2 million positive) and consists mainly of income and expenses of company-wide activities at holding company level.

Note 12 Number of employees

The average number of employees in 2019 was 459 FTE based on a 38-hour working week (2018: 480 FTE), of which working in foreign countries 6 FTE (2018: 8 FTE).

The employee benefits related to the members of the Management Board have been disclosed in Note 31 to the consolidated accounts, Number of employees and personnel costs.

Note 13 Events after the balance sheet date

For subsequent events, see Note 33 to the consolidated accounts, Events after the balance sheet date.

Note 14 Proposed result appropriation

In accordance with the Articles of Association and the dividend policy, the Management Board, after consulting the Supervisory Board, proposes to distribute EUR 0 million to the shareholder and to subtract EUR 214 million from other reserves.

	2019
Dividend	
Dividend Vattenfall AB	-
Total dividend to be distributed	**-**
Result after taxation	- 214
Dividend proposal: Dividend to be distributed	-
Amount to be subtracted from other reserves	**- 214**

Amsterdam, 15 May 2020

Supervisory Board
Magnus Hall
Anne Gynnerstedt
Jan Haars

Management Board
Martijn Hagens

Other Information

Independent auditor's report

To: the shareholder and the supervisory board of Vattenfall N.V.

Report on the audit of the financial statements 2019 included in the annual report

Our opinion

We have audited the financial statements 2019 of Vattenfall N.V., based in Amsterdam. The financial statements include the consolidated financial statements and the company financial statements.

In our opinion:

- The accompanying consolidated financial statements give a true and fair view of the financial position of Vattenfall N.V. as at 31 December 2019, and of its result and its cash flows for 2019 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code.
- The accompanying company financial statements give a true and fair view of the financial position of Vattenfall N.V. as at 31 December 2019, and of its result for 2019 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

- The consolidated balance sheet as at 31 December 2019.
- The following statements for 2019: the consolidated income statement, the consolidated statements of comprehensive income, changes in equity and cash flows.
- The notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

- The company balance sheet as at 31 December 2019.
- The company income statement for 2019.
- The notes comprising a summary of the accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the "Our responsibilities for the audit of the financial statements" section of our report.

We are independent of Vattenfall N.V. in accordance with the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

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

Emphasis of matter relating to uncertainty about Corona and going concern

The developments surrounding the Corona (Covid-19) virus have a profound impact on people's health and on our society as a whole, as well as on the operational and financial performance of organizations and the assessment of the ability to continue as a going concern. The financial statements and our auditor's report thereon reflect the conditions at the time of preparation. The situation changes on a daily basis giving rise to inherent uncertainty. Vattenfall N.V. is confronted with this uncertainty as well, that is disclosed in the report of the management board (see page 16), and the disclosure about events after the reporting period (see page 50). We draw attention to these disclosures. Our opinion is not modified in respect of this matter.

Report on other information included in the annual report

In addition to the financial statements and our auditor's report thereon, the annual report contains other information that consists of:

- The report of the management board.
- Other information as required by Part 9 of Book 2 of the Dutch Civil Code.
- Other statements.

Based on the following procedures performed, we conclude that the other information:

- Is consistent with the financial statements and does not contain material misstatements.
- Contains the information as required by Part 9 of Book 2 of the Dutch Civil Code.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. By performing these procedures, we comply with the requirements of Part 9 of Book 2 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

Management is responsible for the preparation of the other information, including the management report in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Description of responsibilities for the financial statements

Responsibilities of management and the supervisory board for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The supervisory board is responsible for overseeing the company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

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. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.
We have exercised professional judgment and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. Our audit included among others:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error, designing and performing audit procedures responsive to those risks, and obtaining 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.
- Obtaining 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 company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concluding on the appropriateness of management'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 company'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 a company to cease to continue as a going concern.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

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

We provide the supervisory board 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.

Rotterdam, 15 May 2020
Ernst & Young Accountants LLP

Signed by
A.A. Heij

Assurance report of the independent auditor

To: the shareholder and the supervisory board of Vattenfall N.V.

Our opinion
We have performed a reasonable assurance engagement on the graphs relating to the Fuel Mix of electricity supplied and/or produced marked with “RA-verified” (hereinafter: the Fuel Mix) in the annual report 2019 of Vattenfall N.V. (hereinafter: Vattenfall NV).

In our opinion, the Fuel Mix is prepared, in all material respects, in accordance with the guidelines of EnergieNed on the calculation method of the Fuel Mix as established in 2004 and prescribed by the Autoriteit Consument en Markt – ACM (hereinafter: the EnergieNed guidelines).

Basis for our opinion
We have performed our assurance engagement on the Fuel Mix in accordance with Dutch law, including Dutch Standard 3000A, “Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attest-opdrachten)” (Assurance engagements other than audits or reviews of historical financial information [attestation engagements]). Our responsibilities under this standard are further described in the section Our responsibilities for the assurance engagement on the Fuel Mix.

We are independent of Vattenfall NV in accordance with the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagement. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

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

Reporting criteria
The Fuel Mix needs to be read and understood together with the reporting criteria. Vattenfall NV is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting.

The reporting criteria used for the preparation of the Fuel Mix are the EnergieNed guidelines.

Limitations to our assurance engagement
Our assurance engagement is restricted to the Fuel Mix. We have not performed assurance procedures on any other information as included in the annual report 2019 in light of this assurance engagement. The Fuel Mix is presented in the chapter Operational Performance in the annual report 2019. The data relating to the Fuel Mix on which we provide assurance are labelled as “RA-verified” in the annual report 2019.

The quantification of CO_2 emission factors as used in the Fuel Mix is subject to inherent uncertainty due to the designed capability of measurement instrumentation and testing methodologies and incomplete scientific knowledge used in the determination of emissions factors and global warming potentials.

Responsibilities of the managing board and the supervisory board
The managing board is responsible for the preparation of the Fuel Mix in accordance with the EnergieNed guidelines. The managing board is also responsible for such internal control as the managing board determines is necessary to enable the preparation of the Fuel Mix that is free from material misstatement, whether due to fraud or errors.

The supervisory board is responsible for overseeing the reporting process of Vattenfall N.V.

Our responsibilities for the assurance engagement on the Fuel mix
Our responsibility is to plan and perform the reasonable assurance engagement in a manner that allows us to obtain sufficient and appropriate evidence for our opinion.

Our reasonable assurance engagement has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud.

We apply the Nadere voorschriften kwaliteitssystemen (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and other applicable legal and regulatory requirements.

We have exercised professional judgement and have maintained professional skepticism throughout the assurance engagement, in accordance with the Dutch assurance standards, ethical requirements and independence requirements.

The procedures of our assurance engagement included amongst others:

- Evaluating the appropriateness of the reporting criteria used and their consistent application. This includes the evaluation of the reasonableness of estimates made by the managing board.
- Obtaining an understanding of the systems and processes for collecting, reporting and consolidating the information in the Fuel Mix, including obtaining an understanding of internal control relevant to our assurance engagement, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Identifying and assessing the risks of material misstatement of the Fuel Mix, whether due to fraud or errors. Designing and performing further assurance procedures responsive to those risks, and obtaining assurance 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 errors, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. These further procedures consisted amongst others of:
  - Interviewing relevant staff responsible for providing the information in the Fuel Mix, carrying out internal control procedures on the data and consolidating the data in the Fuel Mix
  - Reconciling the overall mix of conventional electricity and the emission factors for import and trade in the Netherlands as published by the ACM with the figures used in the calculation of the Fuel mix
  - Obtaining assurance information that the Fuel Mix reconciles with underlying records of the company
  - Evaluating relevant internal and external documentation, on a test basis, to determine the reliability of the information in the Fuel Mix such as:
    - The production of conventional and renewable electricity
    - Conventional and green electricity (the latter based on Guarantees of Origin from CertiQ) supplied to end customers
    - Purchased conventional electricity
    - Imported conventional electricity
    - Centralized purchased conventional electricity on the APX
  - Performing an analytical review of the data and trends submitted for consolidation at corporate level

Rotterdam, 15 May 2020
Ernst & Young Accountants LLP

Signed by
R.T.H. Wortelboer

Declaration of Compliance with the Code of Conduct for Suppliers and Metering companies operating under their responsibility

(hereafter: Code of Conduct for energy suppliers and metering companies)

Regarding data available through small-scale consumption metering devices which are read remotely.

Name legal entity: Vattenfall Sales Nederland N.V.
Statutory place of business: Amsterdam
Period: 1 January 2019 – 31 December 2019

Vattenfall Sales Nederland N.V. in Amsterdam uses data obtained from small-scale consumption metering devices which are read remotely with the purpose to provide a good performance of its services. In addition to the General Data Protection Legislation ("GDPR"), suppliers and metering companies operating under their responsibility in the Dutch energy sector, set up a Code of Conduct on the use, the capturing, the sharing and the storing of data obtained from small scale consumption measuring devices which are read remotely.

We hereby confirm that Vattenfall Sales Nederland N.V. in Amsterdam has fully complied with the rules and obligations as set out in the Code of Conduct for energy suppliers and metering companies during 2019.

Name legal entity: DELTA Energie B.V.
Statutory place of business: Middelburg
Period: 1 January 2019 – 31 December 2019

DELTA Energie B.V. in Middelburg uses data obtained from small-scale consumption metering devices which are read remotely with the purpose to provide a good performance of its services. In addition to the General Data Protection Legislation ("GDPR"), suppliers and metering companies operating under their responsibility in the Dutch energy sector, set up a Code of Conduct on the use, the capturing, the sharing and the storing of data obtained from small scale consumption measuring devices which are read remotely.

We hereby confirm that DELTA Energie B.V. in Middelburg has fully complied with the rules and obligations as set out in the Code of Conduct for energy suppliers and metering companies during 2019.

Name legal entity: powerpeers B.V.
Statutory place of business: Amsterdam
Period: 1 January 2019 – 31 December 2019

Powerpeers B.V. in Amsterdam uses data obtained from small-scale consumption metering devices which are read remotely with the purpose to provide a good performance of its services. In addition to the General Data Protection Legislation ("GDPR"), suppliers and metering companies operating under their responsibility in the Dutch energy sector, set up a Code of Conduct on the use, the capturing, the sharing and the storing of data obtained from small scale consumption measuring devices which are read remotely.

We hereby confirm that powerpeers B.V. in Amsterdam has fully complied with the rules and obligations as set out in the Code of Conduct for energy suppliers and metering companies during 2019.

Amsterdam, 15 May 2020

Signed by
Martijn Hagens

Annual Statement 2019 in the framework of the Heat Act

Introduction

Heat supply company Vattenfall Warmte N.V. (VF Warmte, formerly known as N.V. Nuon Warmte) is part of the energy production and supply company Vattenfall NV.

Shareholders as at 31 December 2019

The shares of VF Warmte are fully owned by Vattenfall Energy Sourcing Netherlands N.V., a 100% subsidiary of Vattenfall NV. From 1 July 2015 the Swedish state-owned Vattenfall AB owns 100% of the shares of Vattenfall NV.

Supply areas

VF Warmte manages and operates large-scale heat networks in the provinces Gelderland, Flevoland, Noord-Holland and Zuid-Holland.

License

Based on the Heat Act, heat suppliers are required to register heating networks with the Authority Consumer & Market (ACM) and apply for a permit for the supply of heat at the ACM. On 8 March 2016 the permit has been granted by the ACM.

Tasks

The tasks of VF Warmte, which are based on the Warmtewet 2014 (Heat Act) and underlying ministerial regulations and decisions, have a regulated character and include: The distribution and delivery of heat to consumers with a connected load of up to 100kW at a legally established maximum price; ensuring the safety and reliability of the networks and connections.

Annual statement

This annual statement has been prepared based on the Heat act and the underlying ministerial regulations and decisions, which require to prepare separate financial information for each heat supply company as per 1 January 2014. Furthermore, these regulations require heat supply companies to publish an annual statement of their financial information. With this annual statement VF Warmte endorses this obligation.

The accounting policies and principles used in the annual statement are in accordance with the 2019 financial statements of Vattenfall NV and only includes the financial information of the operation of VF Warmte to which the regulation of the Heat Act applies, as VF Warmte also supplies non-regulated heat (supply of heat to consumers with a connected load capacity above 100kW). VF Warmte uses several allocation keys to allocate the total costs of VF Warmte to the regulated and non-regulated supply of heat. Variable purchase costs are allocated to the regulated and non-regulated activities based on the relative number of GJ sold to both customer groups. Fixed purchase costs and other costs are allocated based on the relative number of connections or the relative capacity of the connections.

The financial position and performance of VF Warmte have been included in the consolidated financial statements of Vattenfall NV. EY has issued an audit opinion on the consolidated financial statements of Vattenfall NV (see page 58). Based on Article 2 403 BW VF Warmte is exempted from publishing independent financial statements. In relation to this, a liability statement as referred to in Article 2: 403 BW, is filed at the Dutch Chamber of Commerce.

Financial information for 2019

The tables below represent the financial information for 2019, as far as it concerns the regulated supply of heat (heat to consumers with a connected load of up to 100kW).

Income statement heat-supply

Amounts in EUR million, 1 January - 31 December	2019	2018
Heating revenue	119.3	110.8
Amortisation construction contributions	6.9	6.6
Other net sales	38.6	37.5
Net sales	**164.8**	**154.9**
Heating cost of purchases	-45.7	-41.4
Other cost of purchases	-29.3	-27.7
Other external expenses	-37.5	-39.1 *
Personnel expenses	-22.4	-20.3
Other operating incomes and expenses, net	-0.5	-0.2
Operating profit before depreciation, amortisation and impairment losses (EBITDA)	**29.4**	**26.2**
Depreciation	-23.8	-13.8 *
Operating profit (EBIT)	**5.6**	**12.4**

Balance sheet information heat-supply

Amounts in EUR million	31-dec-19	31-dec-18
Property, plant and equipment	406.5	308.0*
Construction contributions	-169.3	-159.7

* As per 1 January 2019, a lease liability and right-of-use asset is recognised for leases in accordance with IFRS 16, that were previously classified as operating leases through application of IAS 17. In the income statement, the lease expenses is replaced by depreciation of the right-of-use asset and interest expense on the lease liability. Reference is made to Note 3 for more detailed information.

Explanation to the income statement

Amounts in EUR million, 1 January - 31 December	2019	2018
Breakdown of heating revenue	**119.3**	110.8
a1. Heat consumption	67.5	61.3
a2. Hot water consumption	6.4	6.2
b1. Fixed fee heat supply and metering services	29.8	28.1
b2. Delivery kit	15.6	15.2
Breakdown of cost of purchases	**-45.7**	**-41.4**
Variable heat purchase costs	-22.2	-19.8
Fixed heat purchase costs	-22.0	-20.0
Cold water purchase costs	-0.8	-0.9
Electricity purchase costs	-0.7	-0.7
Supplies		
Amount of heating supplied in GJs	3,175,221	3,165,980
Number of connections (<100 kW)	122,082	118,505
Amount of hot water supplied in m3	1,102,719	1,180,061
Purchase		
Purchased heat in GJ	4,783,376	4,759,004
Purchased cold water in m3	1,102,719	1,180,061
Purchase contracts according to Heat Act article 8	14	14
Vattenfall Power Generation B.V.	Production and transport of heat	Production and transport of heat
Stichting VU	Production of heat	Production of heat
Vattenfall Warmte N.V. department Generation Operations	Production of heat	Production of heat
Vattenfall Duurzame Energie N.V.	Production of heat	Production of heat
AVR Afvalverwerking B.V.	Production of heat	Production of heat
Eneco Warmte en Koude Leveringsbedrijf B.V.	Production and transport of heat	Production and transport of heat
Veolia Industriediensten B.V.	Production of heat	Production of heat
ARN B.V.	Production of heat	Production of heat
Indigo B.V.	Transport of heat	Transport of heat
Bio-Energie de Vallei B.V.	Production of heat	Production heat
Bio-Warmte de Vallei B.V.	Transport of heat	Transport of heat
Primco BMC Lelystad B.V.	Production of heat	Production heat
Warmtebedrijf Infra N.V.	Production and transport of heat	Production and transport of heat
Uniper Benelux N.V.	Production of heat	Production of heat

VF Warmte conducts transactions with subsidiaries of Vattenfall NV for the purchase of heat. Transactions with the parties classified as related parties are conducted at market conditions and prices that are not more favourable than the conditions and prices offered by independent external third parties. The transaction price for the purchase of heat from related parties is determined semi-annually in advance, based on forecasted commodity prices and related plant utilisation. The list with purchase contracts includes the significant subsidiaries VF Warmte has transactions with. In addition VF Warmte receives internal charges for services delivered by related parties within the Vattenfall group.

VF Warmte performs construction activities and exploitation services for third parties. Revenues and costs related to these activities are part of the presented income statement as 'Other net sales' and 'Other cost of purchases'. The margin resulting from the work for third parties is part of the regulatory activities and contributes to the coverage of overhead expenses.

Profit appropriation

Profit appropriation is governed by the Articles of Association of Vattenfall NV, which state that the authority to decide over the allocation of profits determined by the adoption of the annual accounts and to make distributions is vested in the General Meeting of Shareholders, with due observance of the limitations prescribed by law.