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change

CEO's Business Review 2018



Highlights 2018

Comparable operating profit

EUR
987
million, +22%

Strategy updated to strengthen competitiveness and ensure a benchmark portfolio for the 2020s

Automation modernisation project in Loviisa NPP

Close to
3 GW
solar and wind portfolio (including associates)

Uniper ownership
49.99%
31 December 2018



Fortum's 2018 reporting entity



CEO's Business Review



Financials



Governance



Remuneration



Tax Footprint



Sustainability
To be published in week 11 at the latest

Materiality process: Our reporting for the year 2018 includes material information on topics we estimate to have a significant effect on Fortum's value creation. Our understanding of stakeholder views is based on the results of the One Fortum Survey, customer satisfaction surveys, the stakeholder sustainability survey, as well as information gained through daily stakeholder collaboration.

CEO's Business Review 2018

Dear stakeholders,

2018 was an eventful year for Fortum. We continued our strategy implementation with the integration and development of our Hafslund and Ekokem acquisitions, further investments in renewables, and most significantly; closing the Uniper tender offer. Our long-term belief in the need for large-scale decarbonisation took a leap forward with the decision to strengthen the Market Stability Reserve and subsequent tripling of emission allowance prices, having a clear positive impact on power prices.

Determined strategy implementation and updated strategy

Driving the change for a cleaner world is at the heart of Fortum's strategy and our role is to accelerate this change by reshaping the energy system, improving resource efficiency, and providing smart solutions.

Over the previous years we have worked hard to deliver on our strategy announced in early 2016. As a result, we now have a portfolio of businesses with good profit potential for coming years. After taking significant steps in the capital redeployment that began in 2016, we updated Fortum's strategy in November 2018. The updated strategy is a natural continuation of the previous one and builds on four priorities.

Our first strategic priority is to pursue operational excellence and increased flexibility in order to ensure benchmark performance of our existing businesses and improve our long-term competitiveness. After the large investments done during previous years it is only natural that the second priority is to ensure value creation from these investments. We will also continue to optimise our business portfolio, considering the ongoing transformation and decarbonisation of the sector. As our third priority, we will continue to drive focused growth in the power value chain. We will build on our long-standing expertise with the strategic focus on CO₂-free power generation – For a cleaner world. Foreseeing the market development towards the end of the 2020s will

be increasingly challenging, but we believe that the uncertainty will also provide new business opportunities. Consequently, as our fourth priority, we aim to build on our existing competences and emerging technologies to create new businesses, independent of power prices, that have the potential for sizeable profit contribution. One example of initiatives in this area is our commitment to invest in Valo Ventures, a new global venture capital fund. Valo Ventures invests in digital start-ups focusing on key global megatrends that are central to Fortum's strategy. Fortum launched Valo Ventures together with Scott Tierney, former Google Capital co-founder.

The operating environment in 2018

The urgent need to decarbonise society is perhaps the greatest challenge of our time. The EU Commission published its long-term climate vision in November. Fortum supports the net zero emission target for 2050, as proposed in the most ambitious scenario. Cost-efficient emission reduction pathways should be established for all sectors. The EU emission trading scheme currently covers less than half of EU's CO₂ emissions. Therefore, strengthening and broadening the scope of the EU ETS to e.g. heating, cooling, and transport should be a key tool to drive decarbonisation. Fortum also supports the UN Global Compact and Caring for Climate initiatives, and is committed to the principles of these initiatives.

The market conditions in 2018 were characterised by the increasing CO₂ emission allowance price, volatile commodity and power prices, as well as the dry Nordic hydrology. Following the decision in late 2017 to strengthen the EU emission trading scheme by increasing the linear reduction factor and introducing the market stability reserve, the CO₂ price increased from EUR 8 per tonne in the beginning of 2018. The CO₂ price was volatile during the year was at EUR 25 per tonne at the end of the year, more than three times higher than a year earlier. This resulted



in 50% higher power prices than a year earlier and the average system spot price for 2018 was EUR 44 per megawatt-hour.

The Nordic water reservoirs were slightly above the long-term average in the beginning of the year and decreased to very low levels in the third quarter, which reduced Fortum's third quarter hydropower production to historically low levels. The year ended at 9 terawatt-hours below average.

Strong financial performance

The impact of the higher power prices is reflected in our full-year comparable operating profit, which increased by 22%. The investment in Uniper only had a marginal effect on Fortum's 2018 results, as they include only Fortum's share of Uniper's third-quarter results. In the future, Uniper's profit and dividends will contribute to Fortum's earnings per share and cash flow.

Our continued investments in wind and solar are starting to have a positive impact on our results. Commissioned in the beginning of 2018 and the first of its kind in Russia, the 35-MW Ulyanovsk wind park is one example of this. The sale of a 54% stake in our 185-MW solar power plants in India freed up capital for further investments, and in June Fortum won a 250-MW auction for an Indian solar park with a fixed tariff for 25 years. Our total wind and solar portfolio has grown substantially during 2018. Together with our associated companies, we have a portfolio of close to three gigawatts of solar and wind parks and development projects in the Nordics, Russia, and India.

Highlight of the year for the Generation division was the clearly improved results, driven by higher market prices. During the year we also finalised the automation modernisation project at the Loviisa nuclear power plant, the biggest single project since the construction of the plant. Following strong improvement in Russia over the past years, the 2018 results in roubles improved slightly. In the City Solutions and Consumer Solutions divisions, 2018 was characterised by the integration of Hafslund, which proceeded well. Unfortunately, the financial results for these two divisions have not yet reached satisfactory levels. We will continue the integration work, and expect the synergies to materialise gradually during 2019 and 2020.

Based on the results of 2018 and the outlook for future years, Fortum's Board of Directors is proposing an unchanged dividend of EUR 1.10 per share for the calendar year 2018.

The Uniper investment

Closing the offer on Uniper shares in June 2018 was the most significant milestone during the year and at the end of December, Fortum held 49.99% of Uniper shares and voting rights.

The strategic rationale of our investment in Uniper is just as valid today as it was when we launched our offer in 2017. Together Fortum and Uniper have the strategic mix of assets – both clean and secure – as well as the expertise required to successfully and affordably drive Europe's transition towards a low carbon energy system. Out of Uniper's 38 GW generation capacity approximately 50% is based on gas, 30% based on coal, and 20% is hydro and nuclear power. While coal-fired generation must be phased out over time, we have a responsibility to ensure security of supply and affordable power and heat for Europeans during the transition and here gas will play a crucial role. Uniper's declared role as a provider of security of supply is an excellent match with Fortum's ambition to accelerate the energy transition with increasing renewable generation and innovative solutions.

Building on this base we have a clear vision for how Fortum and Uniper can jointly build 'The Utility of the Future', and we want to work with the company to explore how to best make this vision a reality for the benefit of all shareholders and stakeholders of both companies. To our disappointment, talks with Uniper did not proceed as anticipated during 2018. However, in early February 2019, the Chairman of the Supervisory Board of Uniper voiced the need for decisive action to enable a fresh start to the relationship. We are delighted that Uniper is now committed to work with us in order to establish in earnest how the companies can work together strategically and operationally. Clearly, it is in the interest of everybody that we now rapidly advance to create value for the stakeholders of both companies.

Continued focus on decarbonisation

Fortum is one of Europe's cleanest power producers. Our CO₂-free production capacity has grown substantially over the last few decades and we will continue to focus on increasing it. To the extent we have fossil-based power production, our goal and strategy is, of course, to make it as efficient as possible. In 2018, 96% of our power generation in the European Union was CO₂-free and our specific CO₂ emissions measured by grams of CO₂ per kilowatt-hour produced were 26 gCO₂/kWh. Including the Russian power generation, which is mainly gas-based, and our Indian solar power we are still in the category of one of the cleanest utilities with 57% CO₂-free and specific CO₂ emissions of 186 gCO₂/kWh.

Decarbonising the power sector will play an essential role in combatting climate change, but it will not be sufficient in order for the EU to meet the targets of the Paris agreement or the 1.5 degree target of the recent IPCC report. Reaching these targets will require decarbonising transportation, heating, and industry, as well as increasing the use of carbon sinks in order to reach carbon neutrality by 2050. Fortum has focused on this in the updated strategy and will develop new products and services to help our customers reduce their carbon footprint, and by building new energy ventures that we believe will play an important role in the future low-emission energy system.

Finally, I would like to thank all our employees for their commitment and hard work during the year and our customers and all other stakeholders for their continued trust in us.

Pekka Lundmark
President and CEO

Three main drivers are shaping the future electricity markets

The world we live in is changing at an ever-increasing pace. Staying competitive requires companies to be very aware of the underlying drivers and to take an active role in driving the change for a better future.

Looking forward, Fortum is well positioned for the ongoing transition in the energy sector towards a decarbonised world, both in terms of asset base and performance. The main drivers influencing the ongoing energy sector transformation are regarded to be:

Climate and environment

Climate change and global warming is one of the largest challenges facing mankind. The problem is global, and global efforts and commitment are required in order to solve it. Discussions about climate change have been ongoing for decades, but actions have not been

sufficient, due to lack of commitment, although positive developments have been seen in some regions.

With the adoption of the Paris Agreement in December 2015, mitigation of climate change rose to the top of the agenda all over the world. The commitment to mitigate climate change in order to limit global warming is now so widely spread that it affects every industry. The effects can be seen everywhere, e.g. the increase in low- or zero-emission housing, better fuel efficiency, the increase in the number of electric vehicles, the rapid growth in solar and wind power production, fuel switches to more environmentally friendly fuels, increased resource efficiency, and waste recycling.

In 2018, the United Nations International Panel on Climate Change (IPCC) released its special report on limiting global warming to 1.5°C. According to the IPCC, this requires “rapid and far-reaching transitions” including carbon dioxide removal from the atmosphere. Global net CO₂

emissions have to decline by 45% from 2010 to 2030 and be net-zero by 2050. According to the report, the power sector should reduce emissions by 100% well before 2050. 70–85% of electricity should be produced from renewable sources and the contribution of nuclear power increases in all scenarios. The IPCC makes explicit references to carbon pricing as a tool to help balance out the impact of higher energy prices in a carbon-constrained world.

The whole energy industry is very heavily affected by this driver. This can be seen in the transition to low-carbon and renewable generation, which increases the share of intermittent power production and the need for demand response and flexible generation capacity. The increased need for resource efficiency paves the way for circular economy solutions.

Politics and regulation

In a global perspective, the relationships between economic powers have recently developed in a way which does not ease reaching broad consensus on climate change measures. The increasing fragmentation in the international political scene increases the regulatory uncertainty. Companies have to be prepared for a possible future where national rather than international market-based mechanisms drive the development of our operating environment.

The energy business is heavily influenced by national and EU-level energy policies and regulations, and Fortum’s strategy has been developed based on scenarios of the future development of the regulatory environment in both existing and potential new businesses and market areas. The overall complexity and possible regulatory changes in Fortum’s various operating countries pose a risk if we are not able to anticipate, identify, and manage those changes efficiently.

Fortum maintains an active dialogue with the bodies involved in the development of laws and regulations in order to manage these risks and proactively contribute to the development of the energy policy and regulatory framework.



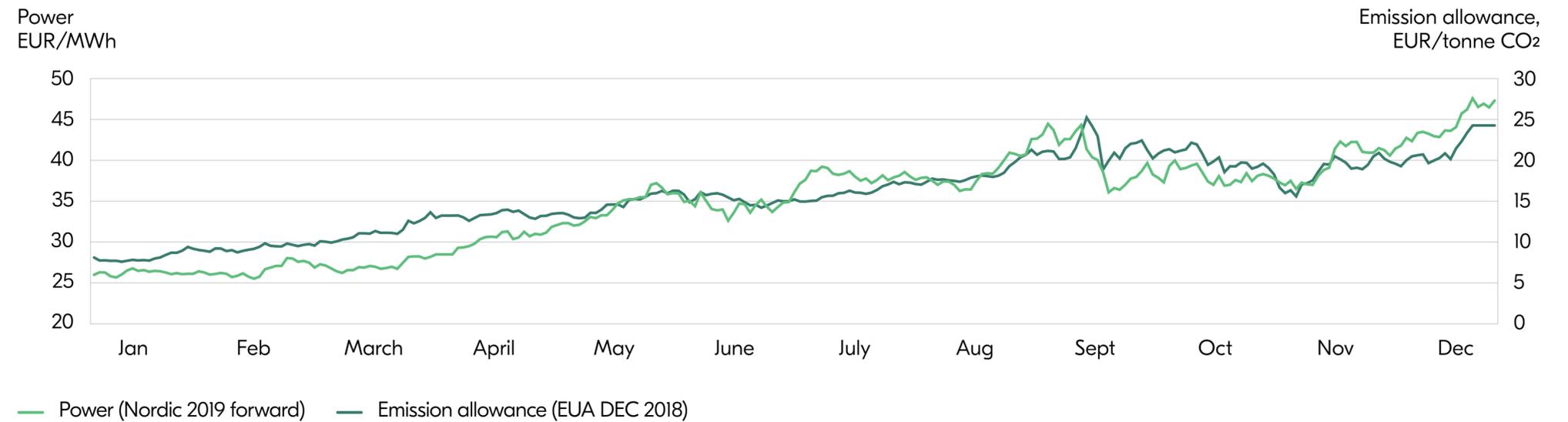
Technology development

Technology development has always been a driver for change. Rapid technological development and high adoption rates quickly drive down the costs for new technologies. Digitalisation is further fuelled by the accelerated pace of commercialisation and adoption of new technologies, such as artificial intelligence. The processing power of devices is increasing and the amount of connected devices is growing exponentially. This in combination with an ever-increasing amount of data readily available for consumers and businesses creates the perfect breeding ground for innovation.

In the energy sector the cost of wind and solar power is decreasing. This development leads to an increasing share of intermittent power production and fewer running hours for traditional baseload power. This challenges the way the energy system has been functioning, where production has been able to adapt to the changing power demand of customers.

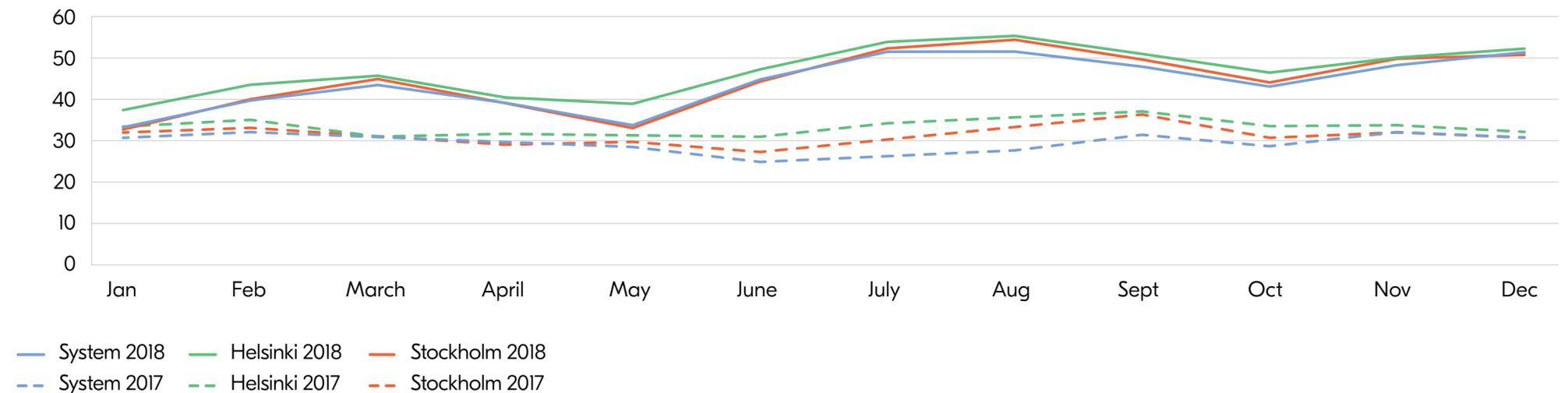
Digitalisation opens up for new storage and demand response solutions, which will change the way the customer interacts with the market. There will be new ways to produce, market, sell, and deliver products and services offered by utilities, start-ups, and new market entrants. Through these services, customers can take an active part in balancing a future power system that is heavily dependent on intermittent power production. In addition to power generation and usage, the technology development is also rapid within the field of transportation. Electric mobility is fast gaining ground as a result of the development of battery technology and processing power. The increasing production volumes are creating economies of scale and reducing production costs of electrical vehicles. Smart charging solutions for the growing amount of electrical vehicles create an opportunity for substantial demand response solutions.

Power and emission allowance prices 2018



Source: Bloomberg

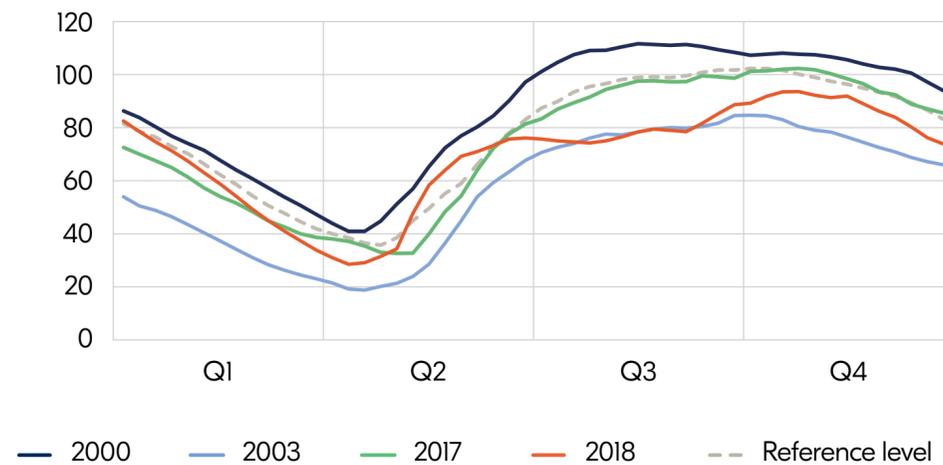
Spot price development 2017 & 2018, EUR/MWh



Source: Nord Pool

The decision to tighten the EU emission trading scheme by increasing the linear reduction factor and introducing the market stability reserve caused the CO₂ price to triple during 2018.

Nordic water reservoirs, energy content, TWh



Source: Nord Pool

Market Development

Whereas the main driver for the Nordic power price in 2016 and 2017 was the price of coal, the CO₂ emission allowance price clearly had the greatest impact on Nordic power prices in 2018. The decision to tighten the EU emission trading scheme by increasing the linear reduction factor and introducing the market stability reserve caused the CO₂ price to triple from EUR 8 per tonne at the beginning of the year to EUR 25 per tonne at the end of 2018. During 2018, the CO₂ price reached levels that did enable switching from low efficiency coal-fired to high efficiency gas-fired power production, even though the amount of switching was limited.

The hydrological situation in the Nordic area weakened in the beginning of 2018. During early fall water reservoirs initially reached very low levels compared to the long-term average, which resulted in Fortum's third quarter hydro power production being historically low. Precipitation increased thereafter, but there was still a deficit in the water reservoirs at the end of the year.

At the beginning of 2018, the Nordic water reservoirs were at 86 TWh, which is 3 TWh above the long-term average and 11 TWh higher than one year earlier. At the end of 2018, the reservoirs were at 74 TWh, which is 9 TWh below the long-term average and 12 TWh lower than one year earlier.

The average system spot price in Nord Pool for the year 2018 was EUR 44.0 (29.4) per MWh, an increase of 50%. In Finland the average area price was EUR 46.8 (33.2) per MWh and in Sweden SE3 (Stockholm) EUR 44.5 (31.2) per MWh. The dry hydrological situation combined with the clearly higher marginal cost for coal condense, due to the higher CO₂ price, were the main reasons for the price increase.

According to preliminary statistics electricity consumption in the Nordic countries increased by 2% during 2018 and was 399 (392) TWh. The higher consumption was mainly driven by colder weather during the first quarter of 2018 and the somewhat higher industrial consumption.

Strategy

The transition towards a cleaner world

The entire energy sector is undergoing a transformation.

Our vision is "For a cleaner world" and reflects our ambition to drive the transformation towards a low-emissions energy system and optimal resource efficiency.

Our mission is to engage our customers and society to drive the change towards a cleaner world. Our role is to accelerate this change by reshaping the energy system, improving resource efficiency, and providing smart solutions. This way we deliver excellent shareholder value.

Sustainability is an integral part of Fortum's strategy in answering to these challenges. Business and responsibility are interconnected, underlining the role of sustainable solutions as a competitive advantage. In our operations, we give balanced consideration to economic, social, and environmental responsibility. We assess our impacts and address sustainability throughout the value chain.

Our values – curiosity, responsibility, integrity, and respect – form the foundation for all our activities.

Fortum's strategy

The ongoing transition towards CO₂-free energy, driven by climate change concerns, politics and regulation, as well as technology development, brings significant opportunities for a company with competences in clean energy. Fortum is well positioned for this transition. At the same time, the future market environment is increasingly uncertain. As a response to this development, Fortum's updated strategy has four strategic priorities:

1. Pursue operational excellence and increased flexibility
2. Ensure value creation from investments and portfolio optimisation
3. Drive focused growth in the power value chain
4. Build options for significant new businesses

Pursue operational excellence and increased flexibility

Benchmark performance is essential for long-term competitiveness. For the next 2–3 years, Fortum prioritises profit creation from the current business portfolio. This will be achieved through operational excellence and increased flexibility. All sources of flexibility, both flexible generation assets and the demand response of large customers and consumers, will be needed to balance the high degree of volatile renewable generation.

Operational excellence and increased flexibility will contribute to improving Fortum’s financial performance and cash flows to create additional financial headroom. In addition, Fortum will continue to prioritise and scrutinize capital expenditure. Through these measures,

the target is to steer leverage from current net debt to EBITDA ratio towards the long-term target ratio of around 2.5 times. Having a solid investment grade rating is a key priority for Fortum.

Ensure value creation from investments and portfolio optimisation

Over the recent years Fortum has made several sizeable investments and aims to further improve its financial performance by ensuring value creation from them. The investment in Uniper, currently accounted for as an associated company, contributes to Fortum’s financial performance both through Fortum’s share of Uniper’s result and its dividend. As Uniper’s largest shareholder, Fortum’s ambition is to increase value for both companies and their stakeholders.

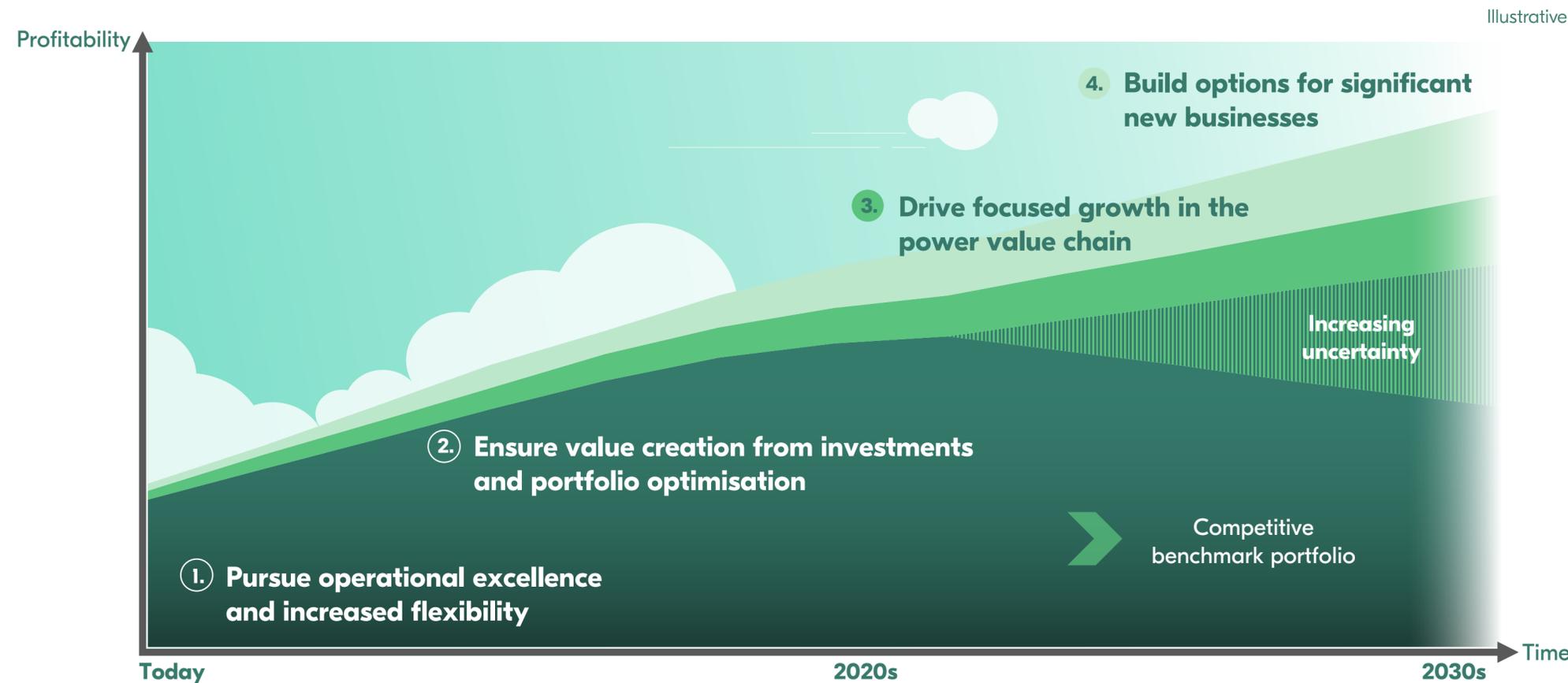
In addition, Fortum continues to review its business portfolio in line with its strategic priorities emphasising CO₂-free assets, flexibility, and low operating cost to fit the changing business environment.

Drive focused growth in the power value chain

Fortum will build on its long-standing expertise to grow in CO₂-free power generation. When it comes to solar and wind investments, Fortum aims to grow by utilising partnerships and other forms of co-operation for a more asset-light structure. The business of the future utility will be increasingly relying on technology, digitalisation, software, and services. Consequently Fortum will continue to develop value-adding offerings and services for customers both in the consumer and industrial sectors.

Build options for significant new businesses

Foreseeing the development of the power markets and regulatory environment will be increasingly challenging towards the end of the 2020s. However, the uncertainty will create new business opportunities. Fortum aims to build on existing expertise and emerging technologies to create new businesses, independent of power prices, with potential for sizeable profit contribution. Circular economy meets these criteria, especially in the areas of waste and recycling as well as bio economy. Furthermore, Fortum will focus on investments in start-up ventures with disruptive potential.



Value-creating strategy



Sustainability at Fortum

In Fortum business and responsibility are tightly linked, underlining the role of sustainable solutions as a competitive advantage. Our renewed strategy steers us towards decarbonisation of the sector and the society at large. Our specific CO₂ emissions from electricity production are one of the smallest among European major electricity utilities, and we support the EU Commission’s long-term climate target of net zero emissions for 2050, as proposed in the most ambitious scenario.

We annually improve the energy efficiency of our power and heat production. In 2018 our annual energy-efficiency improvement was 135 GWh in total. We contribute to circular economy by receiving and treating large amounts of waste from customers. As much of the waste

stream as possible is recycled, reused or recovered as material which shows our strong commitment to smart and efficient use of resources. Concurrently we safely take hazardous waste out of circulation. In 2018, the material recovery rate of waste received from our customers was 59%.

We continuously grow our wind and solar power production. Our strategy is targeting to a multi-gigawatt wind and solar portfolio. In 2018, we made several new investment decisions and investments in wind and solar power in the Nordics, Russia and India. In 2018 we started the supply of the biggest portfolio of a roof-top solar electricity system in the Nordic countries. We also commissioned 123 MW of new wind power in Norway, Sweden and Russia. In addition, the Fortum-Rusnano investment fund has been granted the right to build

almost 2 GW of new wind power in Russia; the wind parks are to be commissioned during the years 2019–2023.

2018 was a year of outstanding performance improvements, but also a year of challenges in terms of occupational safety. Four severe occupational accidents took place in our operations. In order to improve our safety performance we organised training for division managers, key individuals leading safety and procurement work, and the most challenging business areas. We cherish workplace wellbeing and organize activities to promote the health of our employees and the functionality of the work community. In 2018 our Energise Your Day wellbeing programme expanded to new sites and is currently under way in ten operating countries.

Nuclear and dam safety remain at the top of our operational safety priority list. The successfully completed large automation modernisation project at our Loviisa nuclear power plant in 2018 further improves our nuclear safety. Dam safety was improved through upgrading activities at our existing dams to fulfil the current structural dam safety requirements, and activities to ensure safe water management also in extreme hydrological conditions.

Fortum’s responsibility towards the society includes providing secure supply of energy and sustainable solutions for customers as well as acting responsibly towards local communities and the environment. In 2018, our support for activities promoting the common good totalled about EUR 3,8 million. Our commitment to advance social sustainability is also shown in Fortum’s new membership in the Work does not discriminate campaign that promotes workplace equality, and in the Equal by 30 campaign that promotes gender equality. This all paves the way towards a more equal and diverse work environment at Fortum.

Fortum’s sustainability focus areas



Business model

Fortum's business activities cover the production and sales of electricity and heat, waste-to-energy and circular economy solutions, as well as energy-sector expert services and various consumer solutions. Fortum is the third largest power generator and the largest electricity retailer in the Nordic countries. Globally, the company is one of the leading heat producers. As two thirds of Fortum's power production is hydro and nuclear, the company is also among the lowest-emitting generators in Europe.

Fortum's organisation consists of four business divisions: Generation, City Solutions, Consumer Solutions, and Russia. Until November 2018, there were two development units focusing on growing new businesses: M&A and Solar & Wind Development as well as Technology and New Ventures. In November Fortum announced the reorganisation of the solar and wind businesses. The wind operations became a business area within the Generation division and the solar operations within the City Solutions division. The Russian wind and solar operations continued as a part of the Russia division.

With core operations in 10 countries, Fortum employs a diverse team of more than 8,000 energy-sector professionals. Fortum has 124 hydro power plants, 27 combined heat and power (CHP), condensing, and nuclear power plants, as well as three wind power parks and three solar power plants. Globally, the company supplies heat in 23 cities and towns and has five main waste treatment facilities. Fortum's key markets are the Nordic and Baltic countries, Russia, Poland, and India.

Generation

Generation is responsible for Nordic power production. The division comprises nuclear, hydro, wind, and thermal power production, as well as power portfolio optimisation, trading, industrial intelligence, and nuclear services globally.

City Solutions

City Solutions is responsible for developing sustainable solutions for urban areas into a growing business for Fortum. The division comprises

heating, cooling, waste-to-energy, biomass, and other circular economy solutions as well as solar power production.

The business operations are located in the Nordics, the Baltic countries, and Poland. The division also includes Fortum's 50% holding in Stockholm Exergi (formerly Fortum Värme), which is a joint venture and is accounted for using the equity method.

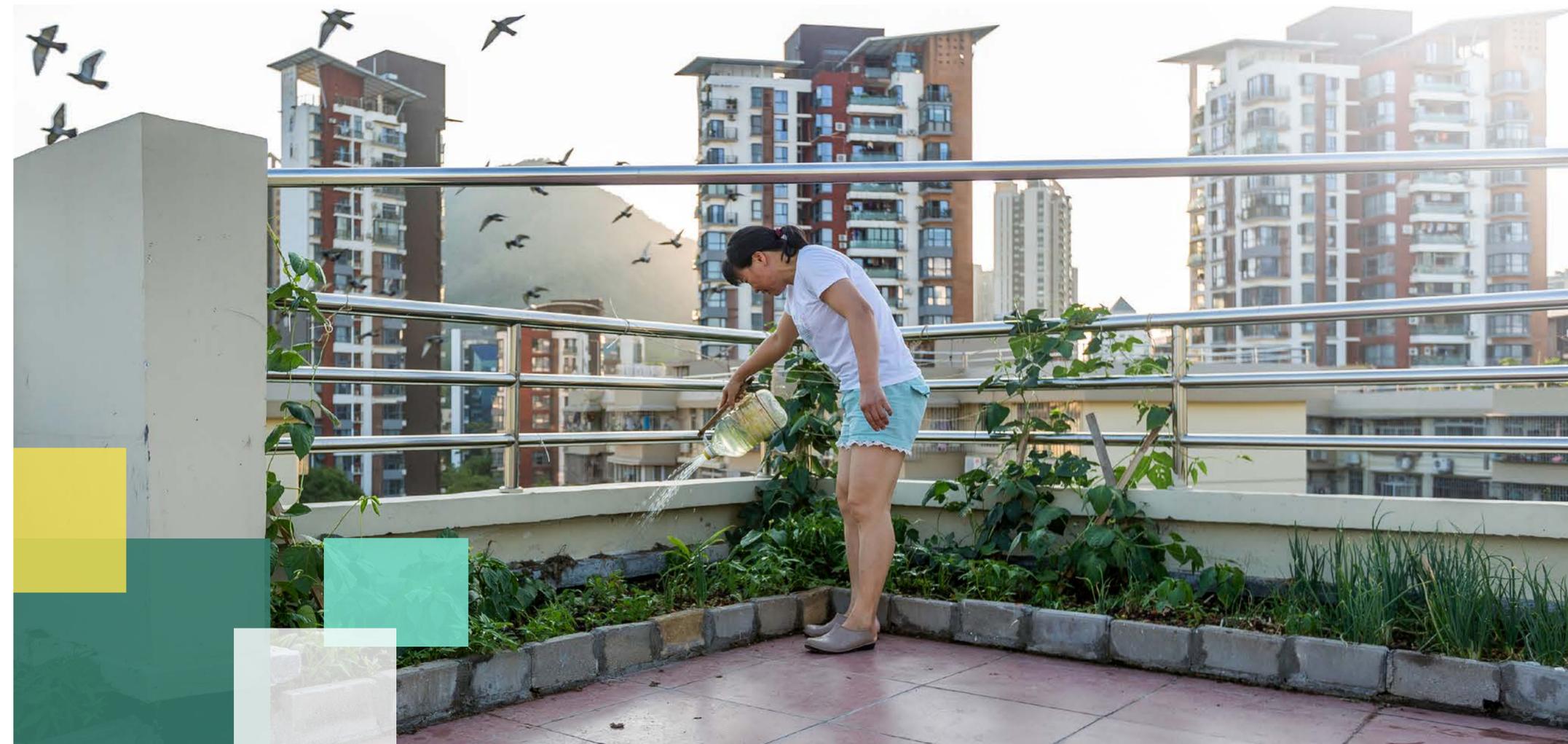
Consumer Solutions

Consumer Solutions is responsible for the electricity and gas retail businesses in the Nordics and Poland, including the customer service,

invoicing, and debt collection business. Fortum is the largest electricity retail business in the Nordics, with approximately 2.5 million customers across different brands in Finland, Sweden, Norway, and Poland. The business provides electricity and related value added products as well as new digital services.

Russia

Russia division comprises power and heat generation and sales in Russia. The division also includes Fortum's over 29% holding in TGC-1, which is an associated company and is accounted for using the equity method.



Future challenges and opportunities

Climate change

We believe that the growing awareness and concern about climate change will increase the demand for low-carbon and resource- and energy-efficient energy products and services. We are leveraging our know how in carbon dioxide-free hydro, nuclear, wind, and solar power as well as in energy-efficient CHP production by offering our customers low-carbon energy solutions. We also believe that the electrification of transportation, industry and services will increase the consumption of low-carbon electricity in particular. Our strategy is targeting to a multi-gigawatt wind and solar portfolio.

Our circular economy services also respond to this demand by utilising waste stream materials as efficiently as possible and by reducing the formation of greenhouse gases generated from biodegradable waste at landfills. Additionally, the use of non-recyclable and non-recoverable waste in energy production replaces fossil fuel.

Our operations are exposed to the physical risks caused by climate change, including changes in weather patterns that could alter energy production volumes and energy demand. Fluctuating precipitation, flooding, and extreme temperatures may affect e.g. hydropower production, dam safety, availability of cooling water, and the price and availability of biofuels.

Hydrological conditions, precipitation, temperatures, and wind conditions also affect the short-term electricity price in the Nordic power market. In addition to climate change mitigation, we also aim to adapt our operations and we take climate change into consideration in, among other things, the assessment of growth projects and investments as well as in operation and maintenance planning.

Power price development

One of the key factors influencing Fortum's business performance is the wholesale price of electricity in the Nordic region. The key drivers behind the wholesale price development in the Nordic region are the

supply-demand balance, the prices of fuel and CO₂ emission allowances, and the hydrological situation.

The overall economic growth impacts commodity and CO₂ emission allowance prices, which has an effect on the Nordic wholesale price of electricity.

Regulatory environment

In the Nordic countries, the regulatory and fiscal environment for the energy and environmental management sectors has also added risks for companies. The main strategic risk is that the regulatory and market environment develops in a way that we have not been able to foresee and prepare for. In response to these uncertainties, Fortum has analysed and assessed a number of future energy market and regulation scenarios, including the impact of these on different generation forms and technologies. As a result, Fortum's strategy includes broadening the base of revenues and diversification into new businesses, technologies, and markets. The environmental management business is based on the framework and opportunities created by environmental regulation. Being able to respond to customer needs created by the tightening regulation is a key success factor.

Research and development

Sustainability is at the core of Fortum's strategy and, alongside Fortum's current businesses, the company is carefully exploring and developing new sources of growth within renewable energy production.

Fortum's goal is to be at the forefront of energy technology and application development. To accelerate innovation and the commercialisation of new offerings, Fortum is strengthening its in-house innovation and digitalisation efforts and building partnerships with leading global suppliers, promising technology and service companies, and research institutions. Fortum makes direct and indirect investments in start-ups that have promising new innovations focused on connectivity, have disruptive potential and accelerate the transition towards a circular economy. Fortum also invests in technologies that

support better utilisation of the current asset base and that can create new markets and products for Fortum. The company is continuously looking for emerging clean energy solutions and for solutions that increase resource and system efficiency.

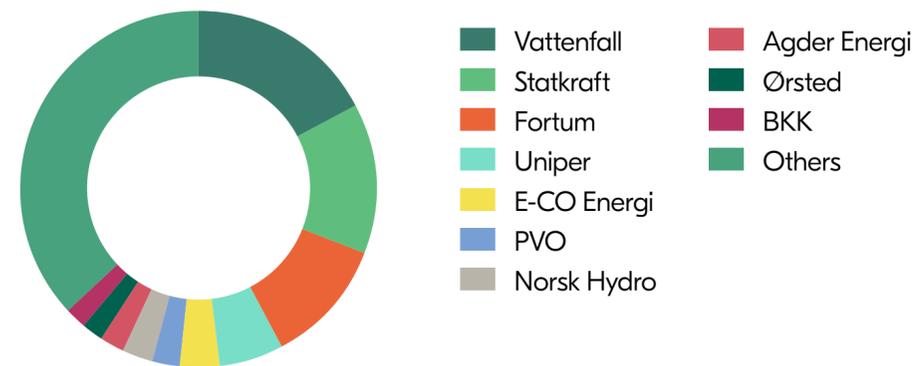
In December 2018, Fortum committed to invest EUR 150 million in Valo Ventures over a period of 10 years. It is an independent fund investing in digital and cloud-scale technology start-ups in North America and Europe. Valo Ventures is aligned with Fortum's vision 'For a cleaner world' and strategy. Fortum launched Valo Ventures together with Scott Tierney, former Google Capital co-founder.



Market position

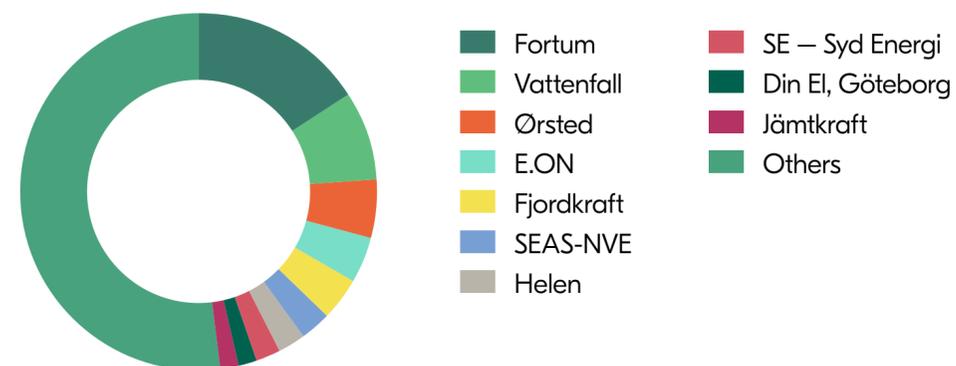
Fortum is the third largest power generator and the largest electricity retailer in the Nordic countries. Globally, we are one of the leading heat producers. As two thirds of our power production is hydro and nuclear, Fortum is also among the lowest-emitting generators in Europe.

Nordic power generation, 402 TWh, over 350 companies



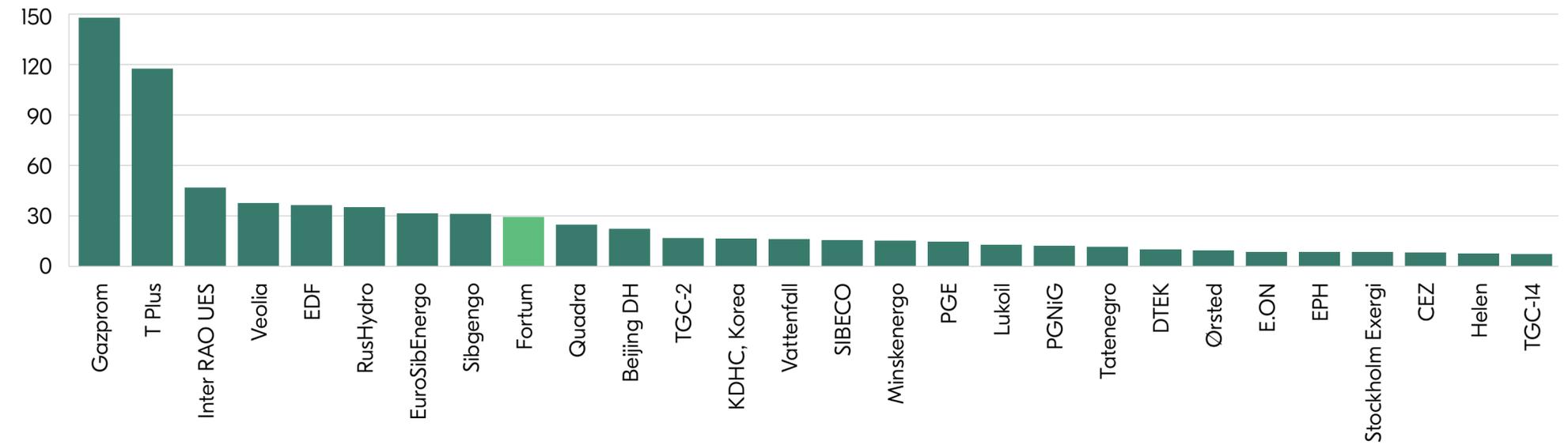
Source: Fortum, company information, 2017 figures pro forma

Nordic electricity retail, 15 million customers, ~350 companies



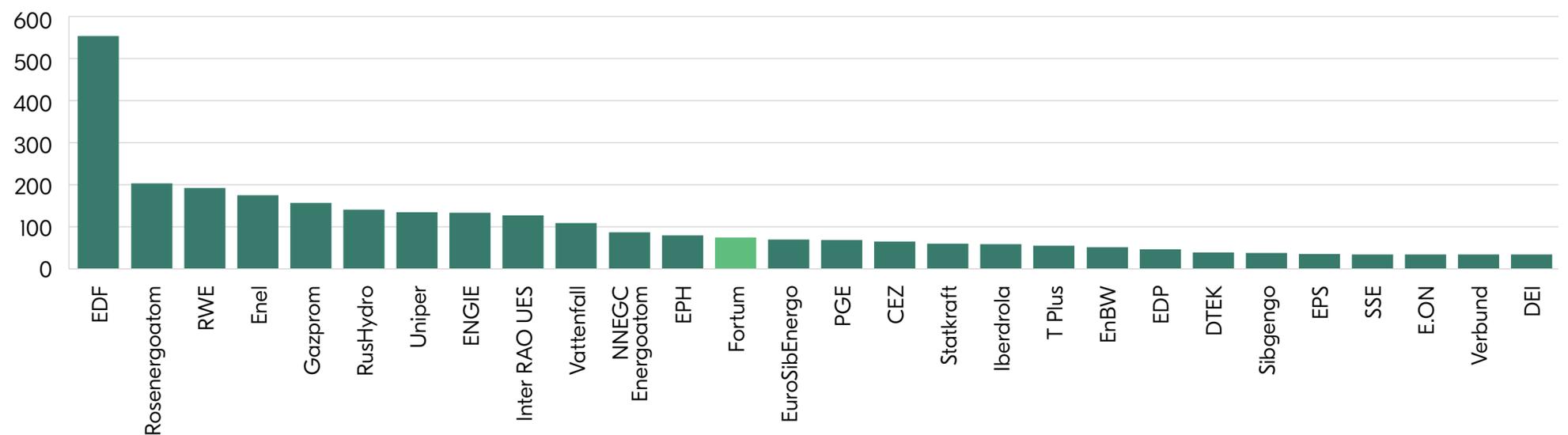
Source: Fortum, company information, 2017 figures pro forma

Largest heat producers globally, TWh



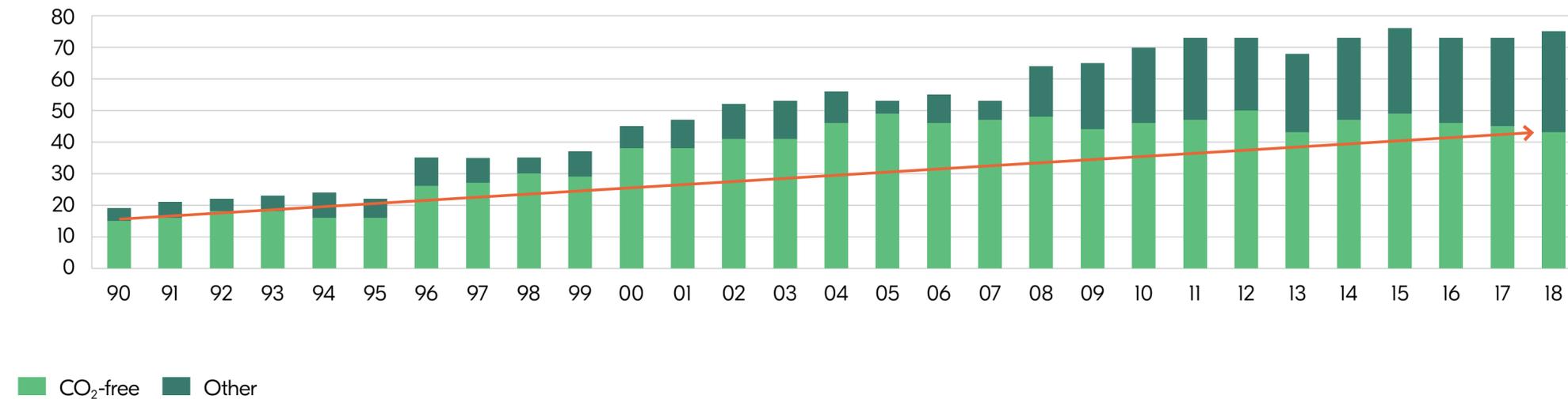
Source: Fortum, company information, 2017 figures pro forma. EPH incl. LEAG. Chinese data incomplete.

Largest power generators in Europe and Russia, TWh



Source: Fortum, company information, 2017 figures pro forma. EPH incl. LEAG

Fortum's power generation, TWh



Long-term focus on no- or low-CO₂ power production

Sustainability and CO₂-free power generation have been part of Fortum's strategy for several decades. We believe that the energy system needs to transform to a system with substantially lower emissions, higher resource efficiency, and a higher share of power generation based on renewables. The transformation will not happen overnight and we must provide customers with a secure energy supply at a competitive price during the transition towards lower emissions. In implementing our strategy we have worked to increase our CO₂-free power generation.

We also have generation capacity based on fossil fuels, located mainly in Russia, and we have worked to increase its efficiency and reduce its specific emissions. We continue to focus on increasing our solar and wind power capacity over the coming years, and we are targeting a multi-gigawatt solar and wind portfolio.

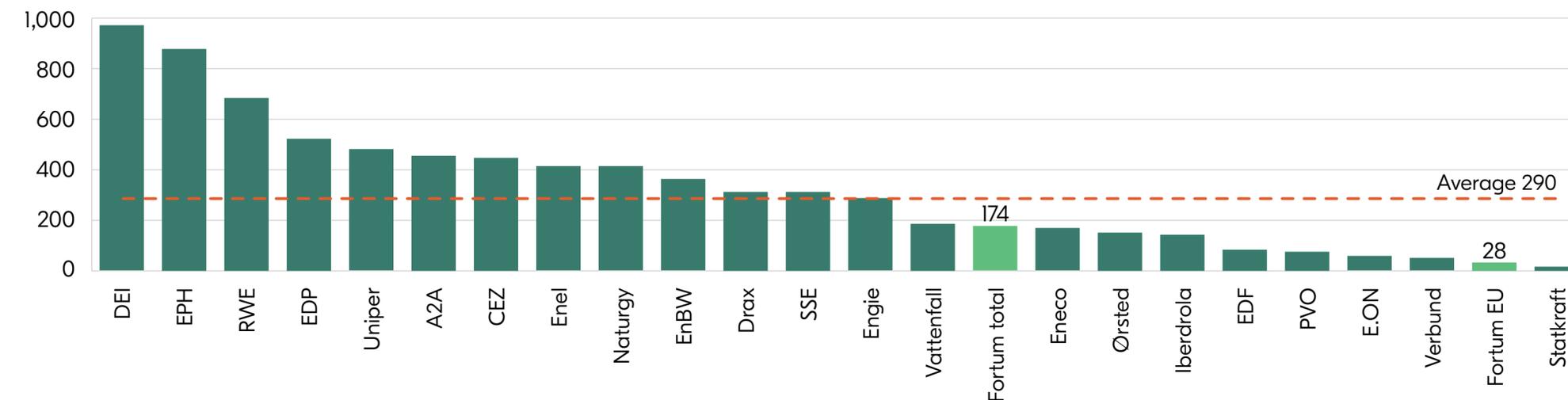
Increasing the CO₂-free power generation

Over the past decades Fortum has been working for a more sustainable world. We have increased our annual CO₂-free power generation from around 15 TWh in 1990 to 43 TWh in 2018. The development has not always been linear, as annual variations in hydropower production have a significant impact.

Among the lowest specific emissions

We were among the early proponents for a market-based price on CO₂. We are advocating for market-based solutions and a strong EU ETS to drive the necessary change in the energy system. In our own operations we have invested in CO₂-free power generation, and the carbon exposure of our production in Europe is among the lowest at 26 gCO₂/kWh in 2018. The respective figure for Fortum overall was 186 gCO₂/kWh in 2018.

Specific CO₂ emissions of major utilities in Europe, g CO₂/kWh electricity, 2017



Note: All figures, except "Fortum total", include only European power generation. Fortum's specific emissions of the power generation in 2018 in the EU were 26 g/kWh and in total 186 g/kWh. Source: PwC, December 2018, Climate Change and Electricity, Fortum



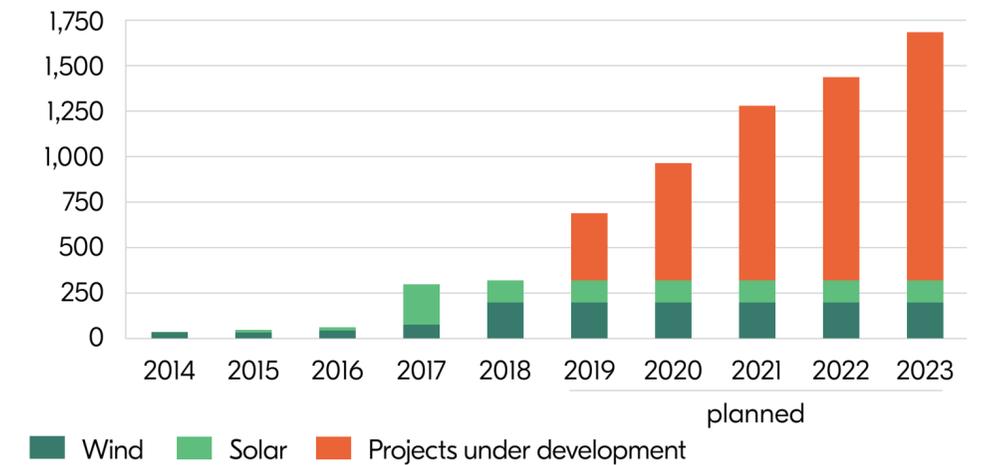
Grow in solar and wind

In addition to CO₂-free hydro and nuclear power production, we believe that solar and wind power will play an essential role in the future. Solar power is becoming one of the most competitive forms of new power generation in many parts of the world, and we are targeting investments totalling EUR 200–400 million in solar power in India. During 2018 we divested a 54% stake in our 185-MW solar power plants in India to free up capital for further investments, and in June 2018 Fortum won a 250-MW auction for a new Indian solar plant.

The market conditions in the Nord Pool area and in Russia are more suitable for wind power, and Fortum is increasing its investments heavily. In January 2018, Fortum commissioned the country's largest wind farm in Russia and in January 2019 we commissioned a further 50-MW wind farm together with our partner Rusnano. In Norway, Fortum commissioned the 50-MW Ånstablåheia wind farm and the 97-MW Sørjord wind farm is due to be commissioned in 2019.

Although the solar and wind capacity is still small compared to Fortum's current total power generation capacity of close to 14,000 MW, our total wind and solar portfolio has grown substantially during 2018. Together with our associated companies, we have a portfolio of close to three gigawatts (Fortum's share 1,686 MW) of solar and wind parks and development projects in the Nordics, Russia, and India.

Fortum's wind and solar power generation capacity, MW



Includes Fortum's capacities and Fortum's share of the capacities of associates and joint ventures