



fortum

Join the
change

CEO letter

2017

Dear stakeholders,

2017 was a significant year for Fortum. During the year we took many important steps in our strategy implementation. We invested in solar and wind power production, restructured our ownership in Hafslund, and towards the end of the year, announced our investment in Uniper. The impacts of our previous investments in renewables, in circular economy, and in Russia can be seen in our strengthened financial results. Our performance was supported by the improving market conditions which had a positive effect on our 2017 results.

Significant strategic milestones reached

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. CO₂-free power generation and deep knowledge about how to operate generation assets is in the very core of Fortum's DNA. It is complemented by our thorough understanding of power markets and trading as well as our deep expertise in combined heat and power production. This is the solid foundation that we build our future on.

Our strategy is based on four cornerstones with a clear priority order. Our first priority and most important cornerstone is to drive productivity and industry transformation. Cornerstone number two and our second priority is to offer solutions for sustainable cities. Through cornerstones three and four – growing in solar and wind and building new energy ventures – we target to secure our long-term competitiveness in the future energy system.

Following the earlier successful Ekokem and Hafslund transactions, we announced the bid for Uniper towards the end of 2017. By investing in Uniper, Fortum continues the strategy implementation and capital redeployment to enable a more efficient use of our balance sheet. Together Fortum and Uniper have a good 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. At the end of the acceptance period in February 2018, 47.12% of Uniper's shares had

been tendered to our offer, including Uniper's largest shareholder E.ON's 46.65% shareholding.

The Hafslund restructuring was concluded in the fourth quarter and the new business structure is now in place. Together with our new colleagues from Hafslund, we have updated the strategies for both our Consumer Solutions and City Solutions divisions. We have now set the path forward and will be working together on implementing the strategy. We target annual synergies of EUR 15–20 million by the end of 2020.

In line with our strategy, we are also investing in new renewable generation and targeting a gigawatt-scale portfolio of wind and solar power. In January 2018, we commissioned Russia's first industrial wind power site with a capacity of 35 MW. During 2017, we also started the implementation of other wind power plants in the Nordics and in Russia, invested in solar power in Russia, and commissioned our largest solar power plant in India.

The operating environment improved in 2017

Following several years of decline power prices reached their lowest levels in February 2016. After that prices rebounded and the upward trend continued through most of 2017. The price of coal, which is one of the main drivers for European power prices, continued slightly upward throughout 2017. However, the mild and wet weather resulting in higher hydro reservoirs and higher hydro production volumes, depressed the Nordic power price for the fourth quarter of 2017.

During 2017, the hydrological situation in the Nordic area strengthened due to clearly higher than normal precipitation. At the beginning of 2017, the Nordic water reservoirs were at 75 TWh and by the end of the year the reservoir level increased to 86 TWh.

Prices for CO₂ emission allowances declined during the first half of the year, but rebounded and ended the year clearly above the 2017 level, which added to the volatility in the Nordic power prices. In December 2017, the EU took a very welcome decision to strengthen the EU emission trading scheme. Although the new legislation will increase the emission reduction target and strengthen



the Market Stability Reserve, it still falls short of meeting the targets of the Paris Climate Agreement.

Strong financial, but disappointing safety performance

Our performance improvement in 2017 was broad-based, with comparable operating profit increasing in most segments. The Generation, City Solutions, and Russia segments continued to perform well, while the Consumer Solutions segment continues to be under pressure due to the tight competitive situation. The acquisitions of Ekokem and Hafslund are already impacting our results positively, further strengthened by our continued Fortum-wide focus on cost and overall efficiency. We have now reached the targeted EUR 100 million savings in fixed costs announced in 2016. The cost savings have enabled us to invest in new ventures for the future.

Going forward we will continue to focus on cost efficiency and investment prioritisation. Sustainability and safety continue to be very important for us at Fortum. 2017 was a challenging year in terms of occupational safety. We did not reach our targets for lost workday injury frequency, especially for contractors. This was a clear disappointment, even though we succeeded in reducing the number of severe accidents to only one. We continue to be committed to keeping our promise to provide a safe workplace for all.

In 2017, our CO₂ emissions decreased slightly. Our specific emissions remained at the same level as the previous year and continue to be at a low level compared to other European power producers.

Accelerating the energy transition with our Uniper investment

The investment in Uniper is a large investment for Fortum and is in line with our strategic goal to drive productivity and industry transformation in Europe. We are also convinced that the investment will accelerate Europe's energy transition in line with our vision "For a cleaner world".

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, all of which will have an important role to play during the transition towards a low-carbon energy system. While coal-fired generation must be phased out over time, we have a responsibility to ensure security of supply and affordable energy for Europeans during the transition. 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.

We aim to take an active role in driving European energy transition. We see plenty of opportunities for co-operation with Uniper to add value for all stakeholders, and we have entered into talks with Uniper to formalise the relationship between our companies after the transaction is finalised. Going forward, Fortum will focus on being an active, supportive, and reliable shareholder of Uniper and a constructive strategic partner to the company, its employees, and other stakeholders. We truly see our investment as a win-win for all involved.

Strategy execution continues with disciplined capital allocation

Fortum has been and will continue to be committed to a cleaner Europe and a controlled transition to a low-carbon energy system. Fortum's 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 production, our goal and strategy is, of course, to make it as efficient as possible. Our specific CO₂ emissions from power generation, measured as grams of CO₂ per kilowatt hour produced (gCO₂/kWh), makes us one of the lowest emitters of all utilities in Europe. In 2017, 96% of our power generation in the European Union was CO₂-free. 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 61% CO₂-free and specific CO₂ emissions of 173 gCO₂/kWh.

The energy sector is among the key sectors that can contribute to mitigating climate change, but the focus should not be solely on electricity generation that accounts for only 20% of energy consumption in the EU. At Fortum, we have decided to take an active role in tackling the challenge also by creating solutions for

sustainable cities, by developing 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 sustainable energy system.

As the strategy implementation and capital redeployment continues, our dividend payment capability will be further strengthened. Fortum's Board of Directors is proposing an unchanged dividend of EUR 1.10 per share for the calendar year 2017. Our ambition is to pay a stable, sustainable, and over time increasing dividend now and in the future, and given the prevailing market conditions, our goal is to avoid a temporary dividend cut.

I would like to thank all our employees for the excellent work and true commitment during the year and our customers and all other stakeholders for the continued trust in us.

Pekka Lundmark
President and CEO

Megatrends and the energy industry

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

This is especially true for the energy industry, as decarbonisation of the energy system plays an essential role in meeting the environmental targets of society. Only by working actively to decarbonise the energy system, significantly expand the share of renewable energy, reduce the emissions, increase the efficiency of older assets, and increase the amount of flexibility in the system can we mitigate climate change.

There are four megatrends that shape the energy sector: climate change and resource efficiency, urbanisation, digitalisation & new technologies, and active customers. These megatrends will bring profound changes not only to how energy is produced and sold to customers, but also to how it is consumed. The megatrends will also push to maximise the value of resources, such as waste and biomass.

Climate change and resource efficiency

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.

The whole energy industry is very heavily affected by this megatrend. 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.

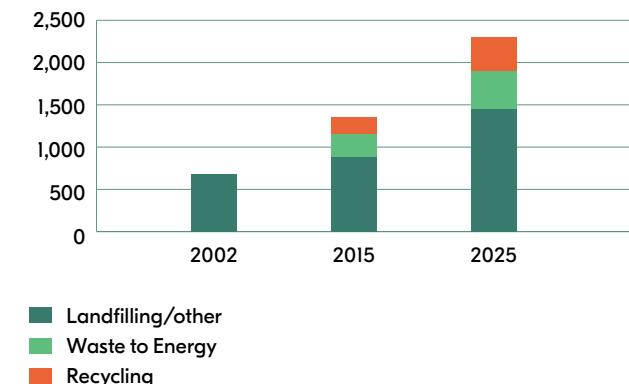
Urbanisation

The second megatrend is urbanisation. Over the last decades an ever-increasing share of the world's population has moved to urban areas and the trend is continuing. This megatrend is very evident in the emerging markets of Asia, where an increasing share of the global GDP growth comes from the growing urban areas.

For many people in developing countries urbanisation might also mean electrification as 1.2 billion people still lack access to electricity. Increased urbanisation creates a demand for sustainable, efficient, and reliable utility services. In many areas of the world the current heating, cooling and energy production is based on old technologies with high emissions and low efficiency. The increasing urbanisation creates a demand for utilities with efficient solutions for heating, cooling, and electricity production.

New solutions are also needed for transportation and waste management. The amount of waste is expected to nearly double between 2015 and 2025. Even with the increase in recycling and waste-to-energy solutions, the global municipal solid waste going to landfills is projected to grow over the coming years.

Global Municipal Solid Waste Development (MSW), mtpa



Source: World Bank Global Review of Solid Waste Management, March 2012; Fortum view



Fortum co-operates with the large Nordic cities of Stockholm, Espoo and Oslo on energy solutions for growing urban areas.

Digitalisation & new technologies

Technology development has always been a driver for change. Digitalisation as a megatrend is further fuelled by the accelerated pace of commercialisation and adoption of new technologies. 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.

This megatrend affects all companies and businesses. Rapid technological development and high adoption rates quickly drive down the costs for new technologies.

In the energy sector the cost of wind and solar power is decreasing. In the next 25 years the amount of solar power is expected to grow 12-fold and wind power more than 3-fold. 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

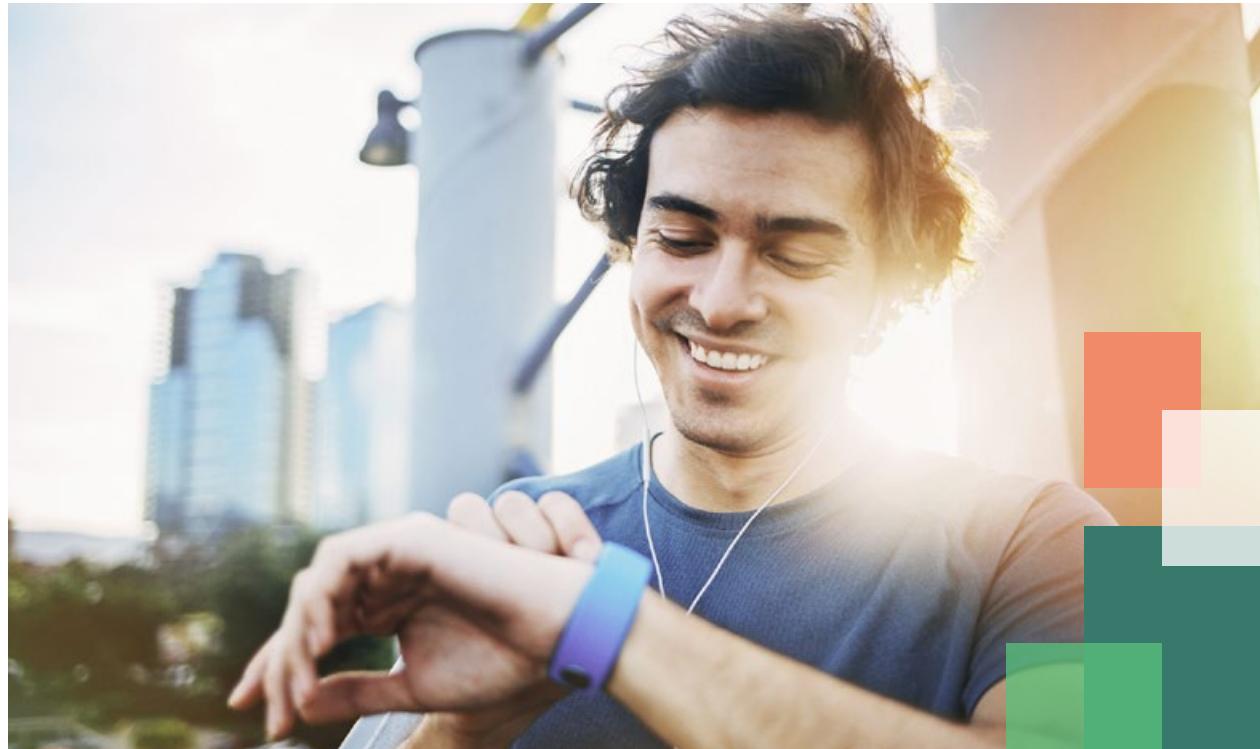
new market entrants. Through these services, customers can take an active part in balancing a future power system that is heavily dependent on intermittent power production.

Active customers

As new technologies are creating a market for new products, there is another megatrend driving the change: active customers. Customers are becoming more conscious about their choices and how they affect society. Customers are more willing to participate in the energy markets, they are aware of what the new technologies enable, and they are demanding services and solutions for that, e.g. home automation, electrical vehicles with smart charging solutions, local power production and storage, as well as demand response solutions.

The market for prosumers (consumers who produce some of their own energy) is growing rapidly. They require solutions for storage and two-way power flows to/from their house, as they act both as consumers and producers of energy. This challenges how the energy markets traditionally have worked and offers great potential for innovation and growth.

The large majority of customers are not yet demanding these types of services, but as the services emerge, they can be expanded to the masses on a large scale, which will have profound effects on the whole market.



By utilising demand response, Fortum's Spring venture has built a one-megawatt virtual battery with the help of one thousand of its consumer customers. The growing virtual battery will play an increasingly important role in maintaining energy system balance.

Market Development

Following several years of declining power prices long-term low levels were reached in February 2016. After that prices rebounded and the upward trend continued until September 2017. The price of coal (one of the main drivers for European power prices) continued slightly upward throughout 2017. However, the mild and wet weather resulting in higher hydro reservoirs and higher hydro production volumes depressed the Nordic power price for the fourth quarter of 2017.

Prices for CO₂ emission allowances (EUA) started at EUR 6.5 per tonne in the beginning of 2017 and declined to only EUR 4.5 in May. Thereafter CO₂-prices increased steadily to EUR 8.2 per tonne at the end of 2017. This added to the price volatility on the Nordic power market.

In 2017 the hydrological situation strengthened due to clearly higher than normal precipitation in the Nordic area. At the beginning of 2017, the Nordic water reservoirs were at 75 TWh,



Power and coal prices 2017

Power, EUR/MWh

Coal, USD/tonne



Source: Bloomberg

which is 8 TWh below the long-term average and 23 TWh lower than a year earlier. By the end of the year, reservoirs were 3 TWh above the long-term average and 11 TWh higher than at the end of 2016.

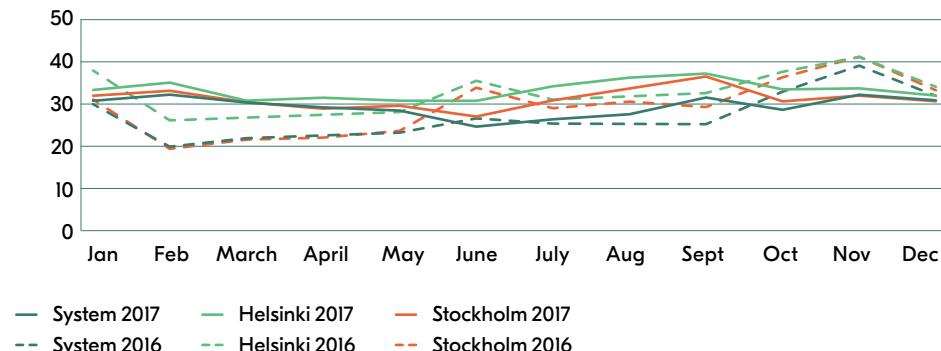
During the first five month of 2017 the Nordic spot power prices were higher than in 2016, mainly due to the very low prices in the beginning of 2016. During the end of the year spot prices were around the same levels as the previous year.

The average system spot price in Nord Pool for the year 2017 was EUR 29.4 per MWh, and the average area price in Finland was EUR 33.2 per MWh and EUR 31.2 per MWh in Sweden SE3 (Stockholm). The main driver for the price increase was the clearly higher marginal cost of coal condensing power, which has contributed to stronger continental prices and increased exports from the Nordics.

Nordic electricity consumption in 2017 increased only marginally by 2 TWh to 392 TWh compared to 2016. A modest basic demand growth seen in the Nordic countries contributed to the increase in consumption.

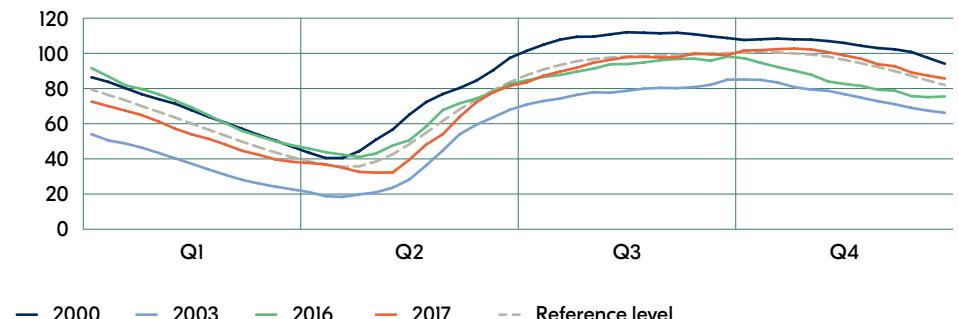


Spot price development 2016 & 2017, EUR/MWh



Source: Nord Pool, Fortum

Nordic water reservoirs, energy content, TWh



Source: Nord Pool

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

Fortum’s strategy has four cornerstones:

- Drive productivity and industry transformation
- Create solutions for sustainable cities
- Grow in solar and wind
- Build new energy ventures

Drive productivity and industry transformation

As the entire energy sector is transforming, our first priority is to participate in the consolidation of the generation business in Europe.

Fortum wants to drive the change towards a cleaner world. However, the change will not happen overnight. Also during the transition we need an energy system that is secure, flexible, and clean. In addition to wind and solar power we need stable and reliable production, such as flexible hydro and gas power, that

Megatrends

- Climate change and resource efficiency
- Urbanisation
- Active customers
- Digitalisation, new technologies

Vision For a cleaner world



secures the functioning of the society at all times, also when there is no wind and the sun does not shine.

In our strategy implementation, one of our goals has been to take a leading role in the consolidation of the European generation business, also through sizable acquisitions. In September 2017, we announced that we have agreed with E.ON to acquire their stake in Uniper and after the offer period ended in February 2018, 47.12% of the shares had been tendered, including E.ON’s 46.65% shareholding. Uniper’s stated role as the provider of security of supply will be an excellent match with our ambition to accelerate the energy transition with increasing renewable generation and innovative solutions. Both are needed to make the change

Mission

We 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.

Strategy



Drive productivity and industry transformation



Create solutions for sustainable cities



Grow in solar and wind



Build new energy ventures

happen and each play a crucial part as Europe transitions from a conventional to a cleaner and more secure energy future.

Create solutions for sustainable cities

We are utilising our know-how and experience to create scalable, sustainable solutions that improve the quality of urban life.

Growing cities and urban areas are facing multiple challenges, such as high emissions from inefficient heating, cooling, and electricity production, increasing amounts of waste, as well as high traffic pollution and noise. We offer today’s digitalised active customers, businesses, and communities heating, cooling, waste management, recycling, and energy-related solutions. This way we



help the cities and its inhabitants solve the challenges sustainably and support building a circular economy.

We have successful partnerships in several cities, and joint ventures with Stockholm and Oslo, to jointly develop solutions for greener cities.

With the acquisitions of Ekokem and Turebergs in 2016, we broadened the scope of our City Solutions to include efficient resource management within the circular economy, which complement our competences in the energy sector well.

For us circular economy means that materials are recycled and utilised as efficiently as possible. At the same time, hazardous substances are removed from circulation. We believe that a phased migration to a circular economy offers a positive perspective and invaluable solutions to today's problems.

Our goal is to develop our recycling and waste management business and launch new solutions on the market for utilising waste as a raw material. We support industries and social actors to find solutions in which someone's waste is another's raw material.

Grow in solar and wind

Solar and wind power have huge growth potential.

Increasing the generation of carbon-neutral energy is one important way to control climate change. Therefore, renewable energy sources play a key role in the change towards a cleaner world. By investing in solar and wind power we are also securing our long-term competitiveness.

We target a gigawatt-scale solar and wind portfolio. These technologies are rapidly maturing. At the same time, utility competences are becoming increasingly important as subsidy schemes are gradually being phased out and renewable energy production is becoming more market-based.

We have started the transition and have 295 MW of solar and wind capacity in the Nordics, Russia, and India as well as several on-going projects. We have also announced plans to further expand our wind power production in Russia.

Build new energy ventures

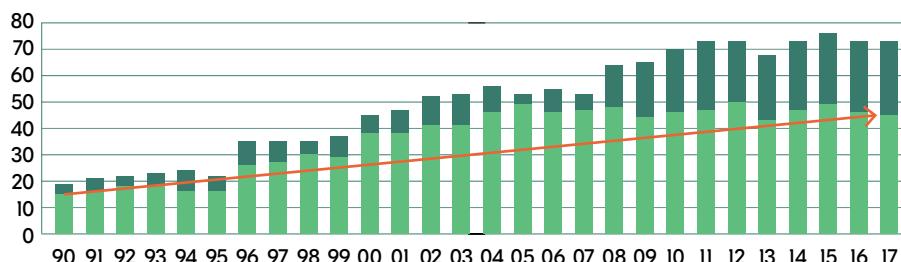
Technological and digital disruption accelerate energy sector transformation. Our goal is to be in the forefront of energy technology and application development.

Digitalisation is enabling us to create new customer offerings and improve the productivity of our businesses. Our focus areas include development of smart home solutions, electric transportation, demand response, and energy storage. Breakthroughs in these areas can transform the way we use energy.

In addition to our own R&D, we are investing in funds and cooperating with start-ups – jointly innovating both new technologies and business models in the changing energy industry landscape.



Fortum's power generation, TWh



■ CO₂-free
■ Other

The Fortum transformation

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 gigawatt-scale portfolio in solar and wind power.

Long-term focus on increasing 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 45 TWh in 2017. The development has not always been linear, as annual variations in hydropower production have a significant impact.

We were among the early proponents for a market-based price on CO₂. We are advocating for market-based solutions and a strengthening of the 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 in Europe at 28 gCO₂/kWh in 2017. The respective figure for Fortum overall was 173 gCO₂/kWh in 2017.



Increase efficiency and reduce specific emissions

When Fortum acquired the Russian power and heat generation company TGC-10 (currently PAO Fortum) in 2008, we committed to a substantial capacity investment program. In 2016, the investment programme was finalised. Thereby our Russian power and heat generation capacity has increased substantially. By investing in high-efficiency combined power and heat plants, we have increased the power and heat output and at the same time substantially decreased the specific CO₂ emissions from our Russian power and heat production.

Fortum is now operating a fleet of power and heat plants with efficiency and emissions ranking among the best of our peers in Russia.

Grow in solar and wind

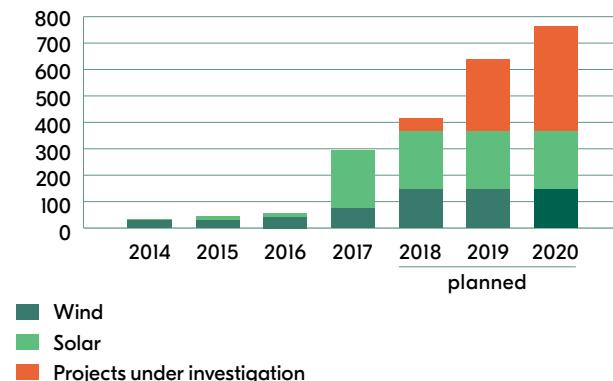
In addition to CO₂-free hydro and nuclear power production, we believe that solar and wind power will play an essential role in the future. Solar power is becoming one of the most competitive forms of new power generation in many parts of the world, and we are targeting investments totalling EUR 200–400 million in solar power in India.

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. In Sweden, Fortum is participating in the Blaiken wind park that is already operational and in the Solberg wind farm, which is due to be commissioned in 2018. In Norway, Fortum recently acquired the operational Nygårdsfjellet wind farm and the Ånstadblåheia and Sørkjord wind farms that are to be commissioned in 2018 and 2019 respectively.

Our target in wind power is up to 1,000 MW in the Nord Pool area and up to 500 MW in Russia.

Although the solar and wind capacity is still small compared to Fortum's current total power generation capacity of close to 14,000 MW, the growth in 2017 was substantial and the capacity increased from 58 MW to 295 MW.

Fortum's wind and solar power generation capacity, MW



Russian specific CO₂ emissions from power and heat production

