



Sustainability 2020

Highlights 2020



Uniper transaction successfully completed and Uniper included as a subsidiary in Fortum's reporting

New corporate strategy released; a Group-wide **carbon neutrality target**, in line with the goals of the Paris Agreement, by 2050 at the latest

New, ambitious safety target measured as TRIF* for own personnel and contractors

<1.0

by the end of 2025

* Total Recordable Injury Frequency

Annual outage at Loviisa nuclear power plant successfully completed, with nearly 1,500 workers from 10 different countries and **no Covid-19 cases**

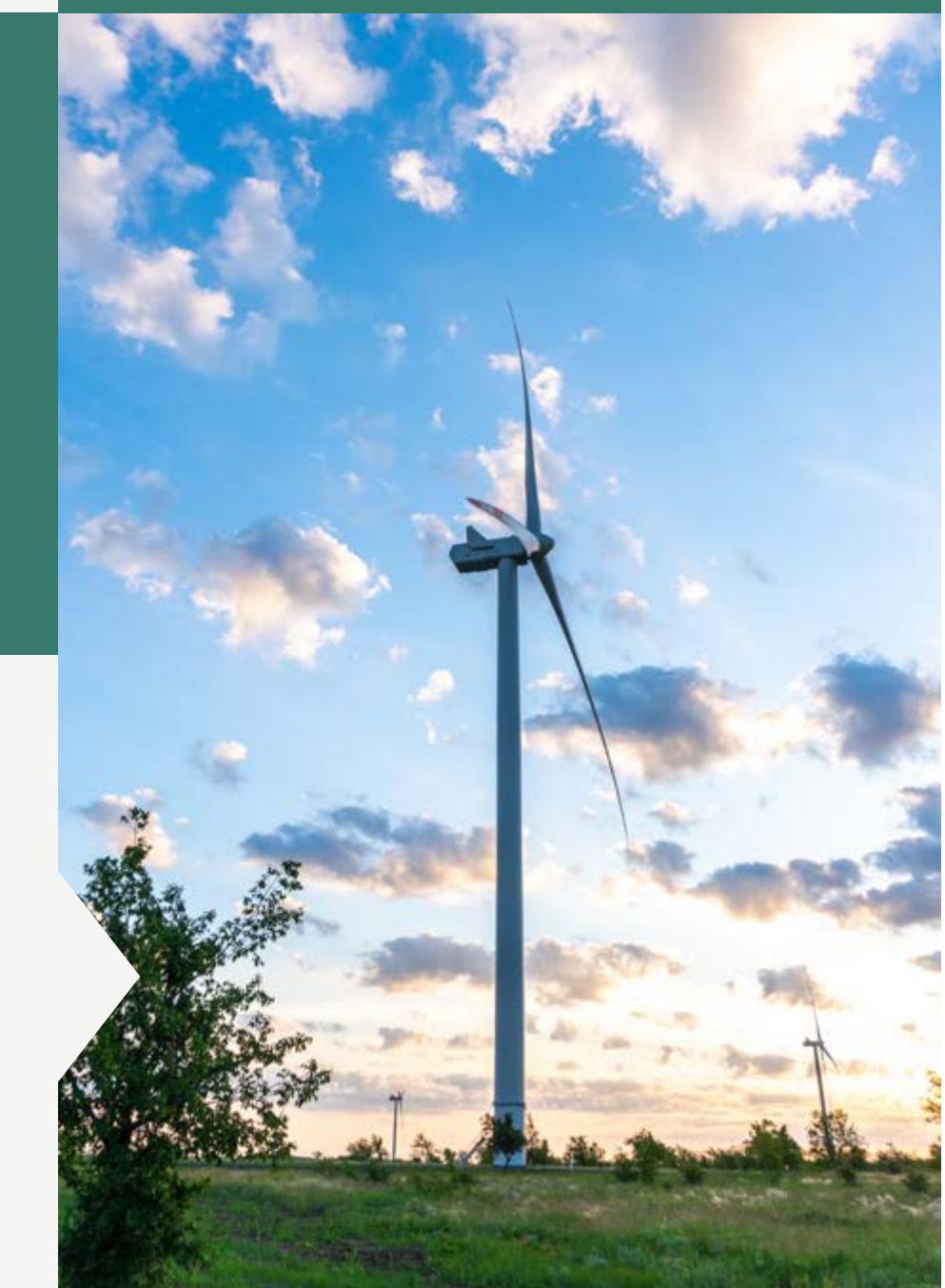
New **Corporate Social Responsibility programme** launched with strategic focus

Coal-exit proceeding well; Uniper coal-fired power plant **Heyden 4 taken out of commercial power generation** at the end of 2020

Increased capacity and competence in **EV battery recycling**

Up to **70%** of new growth investments in 2021–2025 targeted at solar and wind power as well as hydrogen

Employee engagement increased; personnel feels well informed and supported during the Covid-19 pandemic



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Notes:

- Fortum's TCFD report for 2020 is included in the section Climate, pages: 29–38 and in Financials 2020, pages: 21–24 and 34–35.
- Fortum's Non-Financial Information report is included in the Financials 2020, pages: 10 and 21–26
- To make this Sustainability Report fully web accessible, Fortum has aligned all its visuals with the Web Accessibility Directive, (EU) 2016/2102. This allows also people with disabilities to perceive, understand, and navigate through the report.

Fortum's 2020 reporting entity



CEO's Business Review



Financials



Governance



Remuneration



Tax Footprint



Sustainability

Sustainability at Fortum



The entire energy sector is undergoing a transformation and Fortum is an integral part of this change. The faster pace of climate change is accelerating the need for structural changes in society.

Sustainability is at the core of Fortum's strategy. Together with Uniper, we as Fortum Group are now the third largest producer of CO₂-free electricity in Europe and a significant gas company. We have the scale, competence and resources to grow further and drive the energy transition towards a carbon-neutral economy. To be successful, the transition must balance sustainability, affordability and security of supply. This requires renewables, but also increasingly clean hydrogen, energy storage, and other flexible solutions. As greenhouse gas emissions need to be reduced in all sectors, not just in energy, we provide clean energy and sustainable solutions for our industrial and infrastructure customers.

In addition to climate and resources, we pay close attention to the impacts of our operations on our personnel and the society around us. After the outbreak of the Covid-19 pandemic, our top priority has been to maintain business continuity and to secure the health and safety of our own and contractors' employees.

With the updated strategy, we are driving the change for a cleaner world and we wish to engage our customers and society to join this journey.

- ▶ **Fortum's strategy**
- ▶ **Fortum's values**
- ▶ **Fortum in sustainability indices**

[Year 2020 in short](#)[Strategy and carbon roadmap](#)[We support the SDGs](#)[Sustainability priorities](#)[Reporting principles](#)[Business ethics and compliance](#)

Year 2020 in short

2020 was a year of changes at Fortum, including the consolidation of Uniper, a large German energy utility, and the launch of a new corporate strategy. Fortum consolidated Uniper as a subsidiary as of 31 March 2020. At the heart of our updated strategy is the transition to clean energy.

In the exceptional conditions set by the outbreak of Covid-19, which quickly grew into a global pandemic, Fortum's main priority was to maintain business continuity. This goal was well achieved, as there were no interruptions in Fortum's energy production. Also, maintenance outages were implemented as scheduled, with careful planning and by taking special measures to protect the health of our employees and contractors. One positive example of success was that we managed to complete the annual outage at our Loviisa nuclear power plant, involving a total 1,500 of our own and contractors' employees, without a single Covid-19 case. Yet, the impact of the pandemic on our corporate ways of working has been substantial. Most of our office employees have worked remotely since March 2020. We have also taken into use new digital tools that make collaboration and remote work smoother than before. At power plants and other operational sites, where remote work is not possible, we have implemented special measures to protect the health and safety of our own and our contractors' employees.



Climate and resources

From the sustainability point of view, year 2020 was eventful and forward-looking. Our new strategy drives the clean energy transition forward. The key strategic priority is to transform our own power plants and operations to carbon neutral. We have committed to the carbon-neutral (Scope 1, 2 and 3) target globally, in line with the goals of the Paris Agreement, by 2050 at the latest, and in our European generation (Scope 1 and 2) by 2035 at the latest. By 2030, Fortum will phase-out or exit about 8 GW of coal-fired power generation. We will also strengthen and grow in CO₂-free power generation. Our target is to build 1.5–2 GW of new renewable energy capacity by 2025, primarily in Europe.

Fortum is a significant provider of flexible gas-fired generation and a major provider and trader of gas for European energy and industrial customers. Natural gas, an important fuel to enable a reliable and affordable supply of energy in the medium-term, will be replaced with increasingly green hydrogen and other clean gases over time. Transitioning to a low-emission energy system also enables the decarbonisation of other sectors through the coupling of CO₂-free power generation, such as wind and solar power, and green hydrogen. Fortum's strong position in the gas business creates good prerequisites to succeed in providing green hydrogen solutions in the future.

As the world is facing not only a climate crisis but also a global biodiversity crisis, Fortum set a new biodiversity target, addressing the

year 2021. Fortum aims at conducting a minimum of 12 major voluntary measures that improve the living conditions of species and strengthen populations.

Personnel and society

Together with Uniper we grew in business, but also significantly in personnel. The safety of our personnel and contractors remains our top priority, and we set a new, ambitious safety target. We also updated Fortum's Code of Conduct and Supplier Code of Conduct.

On the R&D front, Fortum took major steps with sustainable EV battery recycling in 2020. Our novel metals recovery technology and plans to open a new battery material recycling facility build on our existing competence in material recycling. In waste management we aim to develop the waste-to-energy concept towards material recycling.

In early 2020 we launched a new Corporate Social Responsibility (CSR) programme with three focus areas: Climate, Material revolution, and People. Due to the Covid-19 outbreak, we decided to focus in 2020 primarily on People and started cooperation with selected civil society organisations supporting those most affected by the pandemic: children, youth, and the elderly. We also supported local communities in many operating countries by providing materials for local healthcare centres working on the frontline of the pandemic.

Value-creating strategy



Year 2020 in short

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Strategy and carbon roadmap

In December 2020, Fortum updated the strategy for the whole Fortum Group: to drive the clean energy transition and deliver sustainable financial performance. Aligned with the goals of the Paris Agreement, Fortum targets carbon neutrality by 2050 with ambitious mid-term targets.

Fortum has transformed itself, having invested about EUR 11 billion over the past six years to become Europe's third largest CO₂-free power generator and a large player in gas. As such, Fortum is now well positioned to capture opportunities resulting from the energy transition, aimed at curbing climate change. To be successful, the energy transition must balance sustainability, affordability, and security of supply. It requires not only renewables, but also increasingly clean gas, energy storage, and other flexible solutions to provide security of supply and to decarbonise also heating and cooling, industry, and transportation.

As part of the strategy update, Fortum's purpose (replacing the previous vision and mission statements) has been defined as:

Our purpose is to drive the change for a cleaner world. We are securing a fast and reliable transition to a carbon-neutral economy by providing customers and societies with clean energy and sustainable solutions.

Fortum's updated strategy is based on four strategic priorities:

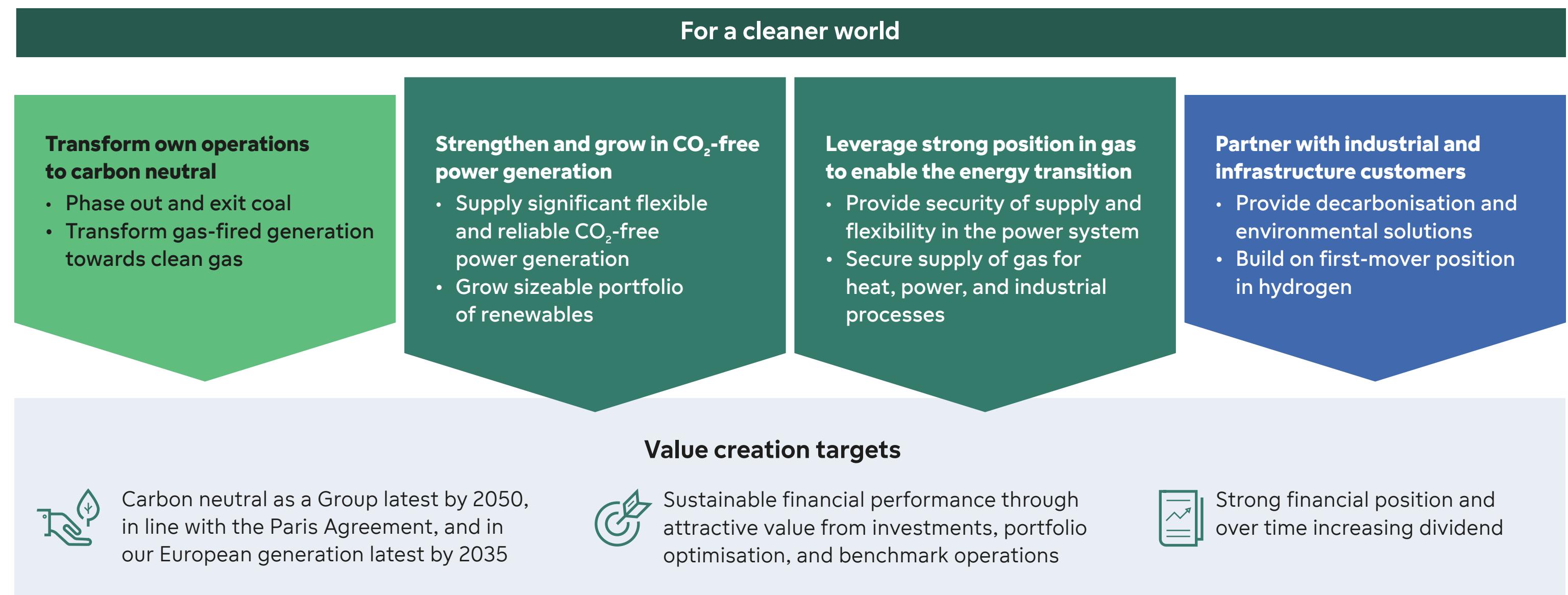
- Transform own operations to carbon neutral
- Strengthen and grow in CO₂-free power generation
- Leverage strong position in gas to enable the energy transition
- Partner with industrial and infrastructure customers

In 2020, Fortum updated its financial targets and dividend policy.

The long-term financial targets are:

- Financial net debt/comparable EBITDA below 2x
- Hurdle rates for new investments of WACC
 - +100 bps for green investments
 - +200 bps for other investments

Fortum Strategy: Driving the clean energy transition and delivering sustainable financial performance



The sustainability targets for the year 2020 were defined for Fortum, excluding Uniper. However, as Fortum started to consolidate Uniper as a subsidiary as of 31 March 2020, the extent of operations, sustainability impacts and performance figures of Fortum materially changed. Therefore, in this report Fortum only reports sustainability performance with selected key indicators presented without comparing performance against the previously set targets for 2020, as they are no longer relevant for the altered Group.

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Transform our own operations to carbon neutral

In December 2020, Fortum announced a new strategy and its commitment to carbon neutrality. Fortum aims to drive the clean energy transition and focuses on reducing CO₂ emissions from its own operations. We have committed to the carbon neutral (Scope 1, 2, and 3 greenhouse gas, GHG, emissions) target globally, aligned with the goals of the Paris Agreement, by 2050 at the latest. In addition, we have the following ambitious mid-term targets in Europe:

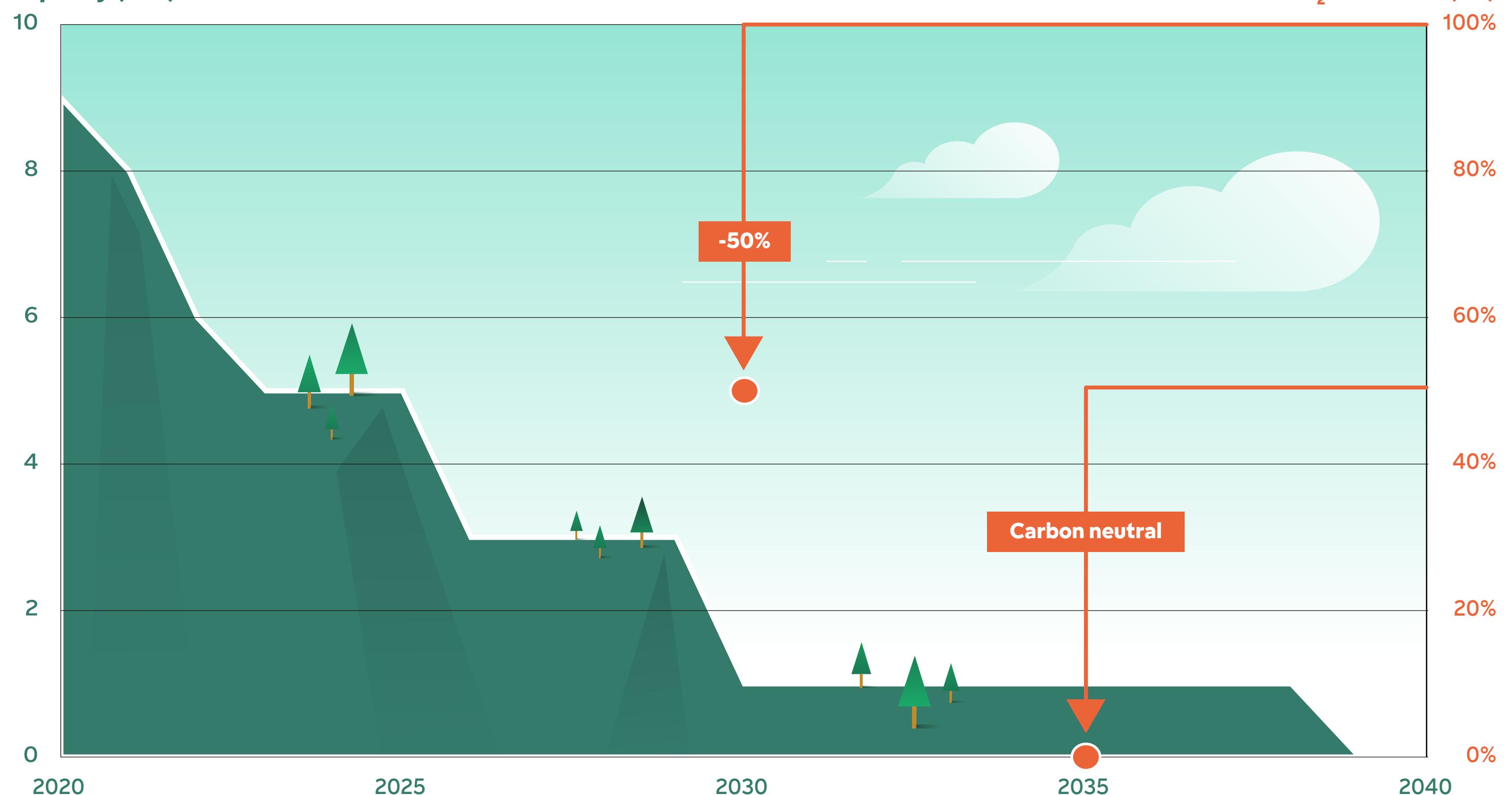
- Reduction of CO₂ emissions (Scope 1 and 2) in European generation by at least 50% by 2030 (compared to base-year 2019)
- Carbon neutral (Scope 1 and 2) in European generation by 2035 at the latest.

Scope 3 GHG emissions play a significant role in Fortum's total GHG emissions. During 2021, Fortum will develop a Group-target for the reduction of Scope 3 GHG emissions, addressing especially the indirect emissions from the fossil fuel sales to end-users.

The chart presents Fortum's coal-fired power generation capacity and its phase-out in Europe. By 2030, Fortum will phase-out or exit about 8 GW of coal-fired power generation. The chart also presents our CO₂ emission reduction target and our commitment to carbon neutrality in European generation by 2035 at the latest. With these commitments, we aim to transform our own power plants and operations to carbon neutral in Europe.

Fortum's coal-fired power generation capacity and CO₂ emission reduction targets in Europe

Capacity (GW)



* Scope 1 and 2 emissions, compared to 2019 as base year

Decarbonising society

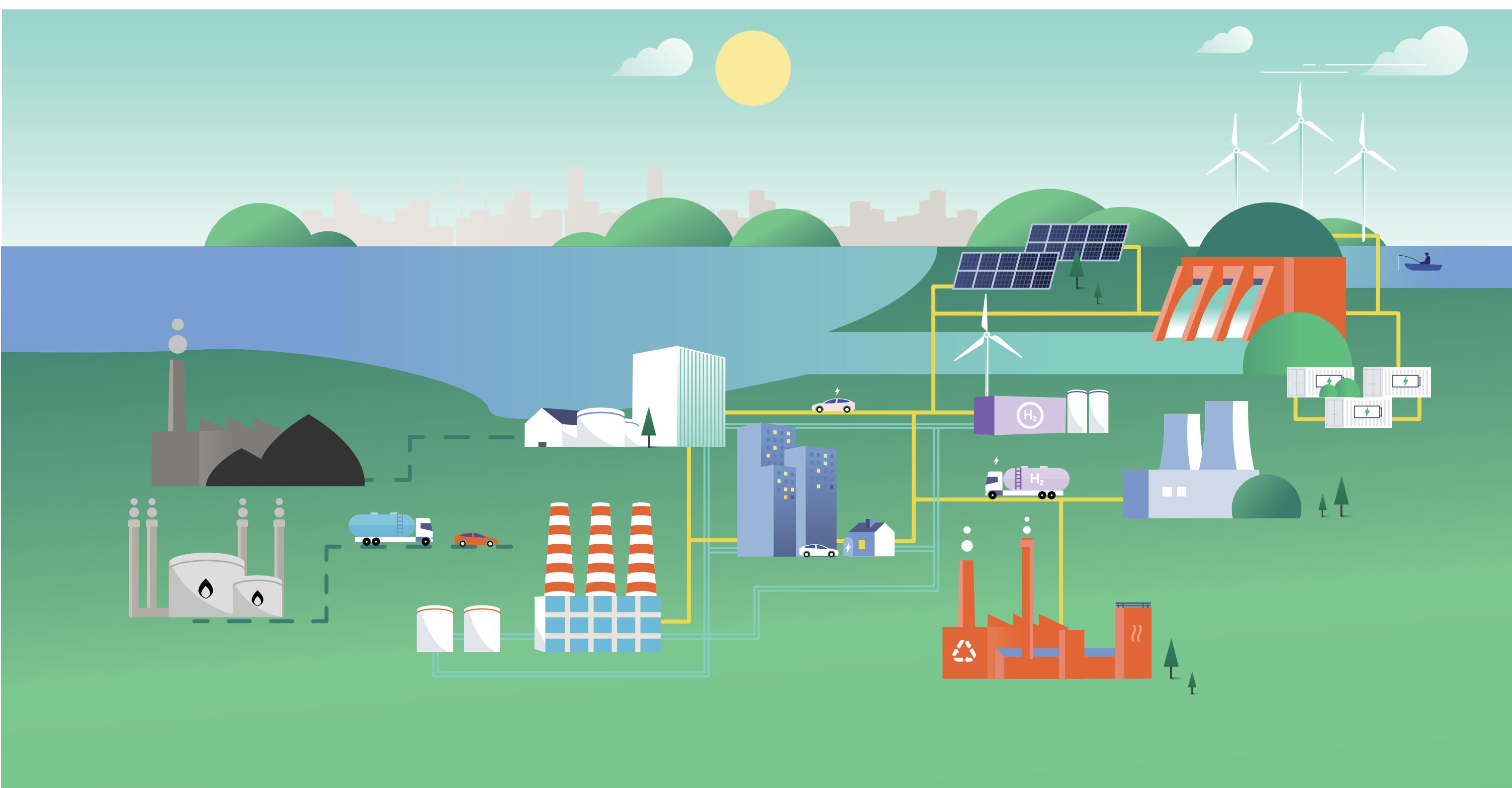
Customers are expected to become increasingly active in the digitally interconnected energy system in the future, and industrial customers across different sectors are demanding scalable, competitive solutions to decarbonise their operations and mitigate their environmental impacts. Fortum is responding to this demand by offering [► solutions and services for our industrial and infrastructure customers](#), including sectors that are hard to decarbonise, such as the chemicals industry, the steel industry, and international shipping.

The infographic depicts the increasingly diverse and gradually changing energy system. Fossil-fuelled generation will be replaced with CO₂-free power generation. Fortum aims to build 1.5–2 GW of new renewable electricity capacity by 2025, primarily in Europe. The new energy system requires new flexible energy sources to balance fluctuations, including, e.g., batteries and other storage facilities, as stable fossil-fuelled power generation is replaced with intermittent renewable energy sources, such as wind and solar power.

Replacing coal with natural gas in Central European energy production is one possible short- to medium-term way to reduce CO₂ emissions in Europe. Natural gas enables the transition to a low-carbon energy system by enabling the growth of renewable power in the system, as well as by acting as fuel or feedstock for the industrial sectors. Fortum's strong position in the gas business also creates new business opportunities in providing clean gas solutions (e.g. hydrogen) and supporting industries in decarbonising their processes. Transitioning to a low-carbon energy system also enables the decarbonisation of other sectors through the coupling of CO₂-free power generation and green hydrogen. Over time, increasingly green hydrogen will replace natural gas by decarbonising hard-to-electrify sectors and will provide flexibility and security of supply for the energy system.

In short, the energy transition and the transition to carbon neutrality rely on clean power and gas (e.g. hydrogen). Fortum's strategy is designed so that Fortum will be successful in a decarbonised society.

Transition to net zero carbon relies on clean power and gas



Case | Hydrogen – an innovative solution for decarbonising hard-to-electrify sectors

Hydrogen has increased in importance as a promising technology for decarbonising sectors where electricity alone is unlikely to suffice. In the energy system, hydrogen can help offset fluctuations in production and consumption, and it enables the increase of solar and wind power in the energy system. Hydrogen and hydrogen-derived synthetic fuels can also replace natural gas and oil in many industrial and transport applications.

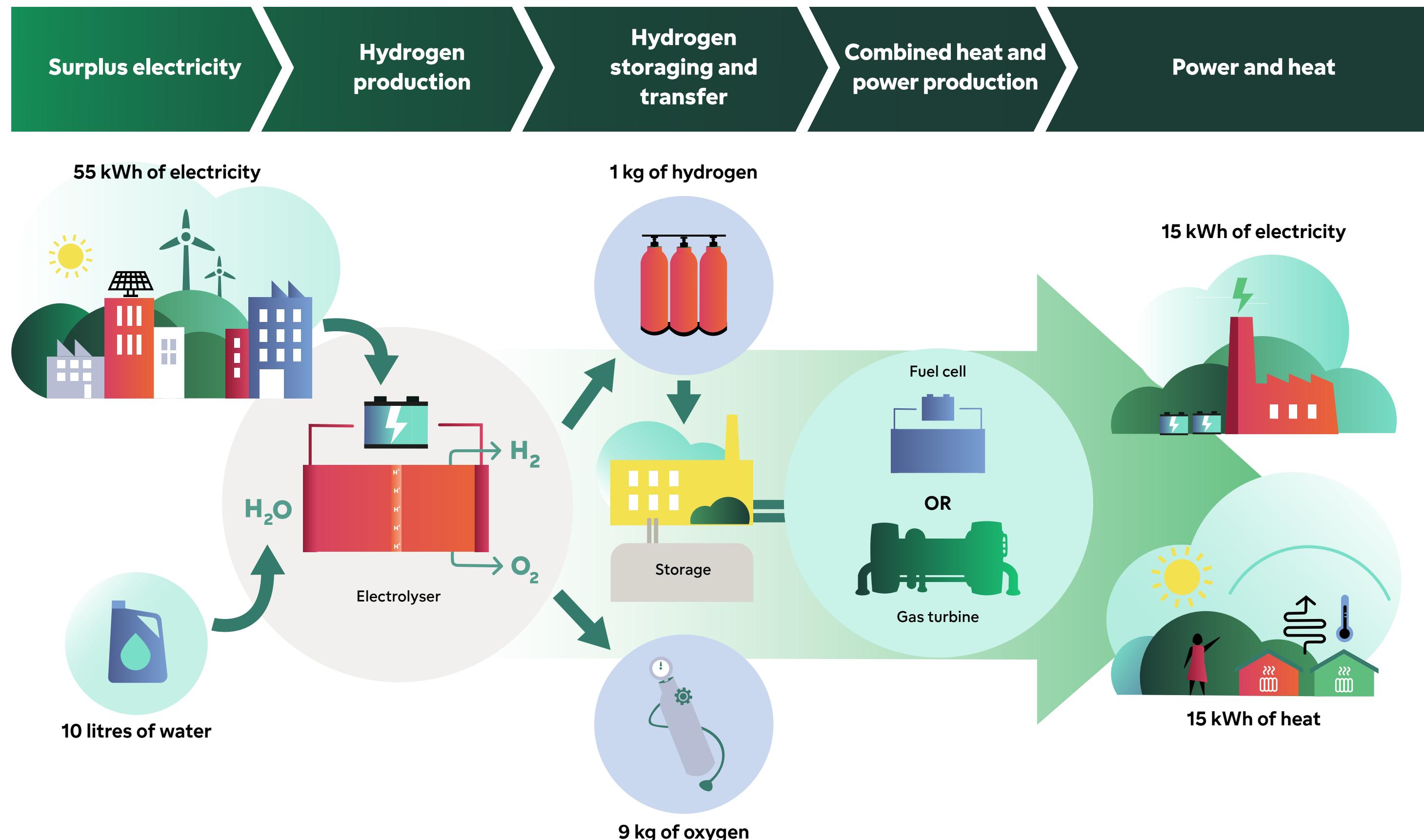
Hydrogen in power and heat production

Renewable hydrogen, also known as green hydrogen, is a fully emission-free solution produced through power-to-gas (P2G) technology. It means that solar or wind power is used to power electrolysis that splits water molecules (H_2O) into oxygen (O_2) and hydrogen (H_2). The produced hydrogen can be stored and used later in fuel cells or gas turbines to produce electricity and heat. No carbon dioxide emissions are generated when combusting pure hydrogen; the only by-product is the original raw material, water.

Fortum and hydrogen

In line with the new corporate strategy, Fortum aims to build on its first-mover position in hydrogen economy. Uniper is a pacesetter in low-carbon hydrogen. Its first P2G unit in Falkenhagen, in eastern Germany, entered service already in 2013. In late 2020, Fortum and Uniper announced plans to cooperate in green hydrogen production with Perstorp, a specialty chemicals company that aims to produce sustainable methanol in Sweden. The latest announcement, from early 2021, states that Uniper plans to start large-scale production of green hydrogen at the Maasvlakte power plant in Rotterdam, Netherlands.

In addition to hydrogen production, Uniper has also significant underground gas storage capacities in Germany, Austria, and the UK. In the future, some of these capacities can be harnessed for hydrogen storage, which is a crucial part of the future hydrogen economy. All in all, Uniper's



current presence at all stages of the hydrogen value chain, with more than ten new projects in the business development pipeline, combined with Fortum's strong presence in the Nordic countries, gives Fortum and Uniper

together a truly advantageous opportunity to actively shape the future hydrogen market.

We support the UN Sustainable Development Goals

Fortum as a provider of clean energy and sustainable solutions supports the UN Sustainable Development Goals (SDGs) on the journey towards a carbon-neutral economy. With our strategy, we are driving the change for a cleaner world.

Sustainable Development Goals and Fortum

The [► Sustainable Development Goals \(SDGs\)](#) adopted by the United Nations in 2015 are global goals set to solve economic, social and environmental challenges by 2030. The 17 goals have been set based on science and research, and they aim to solve global-level social problems. Through the goals, the UN is calling for and inviting companies to take action to solve the challenges using business means and the creativity and innovation characteristics to companies.

We at Fortum want to do our part to promote the achievement of these goals in our own value chain. We see business opportunities in the goals, but we also aim to shoulder our responsibility for our adverse impacts and to prevent them. Ten of the Sustainable Development Goals that are key for us are presented in the graphic. Through innovative products and services, we offer solutions for six of the goals on the right (Our opportunities). We are pursuing a carbon-neutral economy not only within the framework of our own operations, but also by offering solutions to our industrial and infrastructure customers.

Goals 5 and 8 on the left (Our responsibilities) are important to us from the social-society perspective, for our personnel, contractors, nearby societies, and the entire supply chain. In 2020, we launched a new Corporate Social Responsibility (CSR) programme, which made goal 17 also central to us. As for goal 15, we know the responsibility we have for our impacts and dependency related to ecosystems and biodiversity.



Fortum supports the Sustainable Development Goals.

Key UN Sustainable Development Goals for Fortum



Examples of measures we implemented in 2020 that promote the achievement of the Sustainable Development Goals

Sustainable Development Goal (SDG)	Fortum and SDG	Measure
Climate and resources		
 13 CLIMATE ACTION	13 CLIMATE ACTION	<p>Fortum supports an ambitious, market-driven climate policy, and develops and provides customers with clean energy solutions that reduce CO₂ emissions.</p> <ul style="list-style-type: none"> In December 2020, Fortum announced its new climate targets with a clear path to carbon neutrality, in line with the goals of the Paris Agreement, by 2050 at the latest. Fortum also set a minimum 50% reduction target for carbon dioxide emissions in European generation by 2030 compared to base-year 2019. Fortum's CEO, Markus Rauramo, is one of the over 170 business and investor CEOs who urged the EU to raise the EU 2030 emission reduction targets to at least 55% through an open letter organised by CLG Europe. Fortum joined Hydrogen Europe, a big European hydrogen advocacy organisation, and European Clean Hydrogen Alliance, a platform established by the European Commission, aiming at establishing an investment agenda and supporting the scaling up of hydrogen value chain across Europe. The Meri-Pori coal-fired power plant in Finland was transferred to the Energy Authority's national peak-load reserve capacity system in June 2020. In March 2020, Fortum and Kvaerner, a Norwegian engineering and construction services company, signed a Memorandum of Understanding (MoU) on project cooperation. One opportunity to be evaluated is the potential realisation of new carbon capture plants. In September 2020, the Norwegian government announced plans concerning the financing of carbon capture and storage (CCS) in Norway. As part of the project called Longship, the government intends to finance carbon capture at Fortum Oslo Varme's Klemetsrud waste-to-energy plant in Oslo with EUR 300 million, providing that the project secures sufficient own funding as well as funding from the EU or other sources. Uniper participates in the work of CO₂ Value Europe aiming at setting standards for the new carbon capture and utilisation (CCU) industry. The goal is to use smart CO₂ recycling technologies to transform captured carbon into valuable products, like various fuels, building materials, and plastics. In November 2020, Perstorp, a specialty chemicals company, announced the goal to start producing sustainable methanol in cooperation with Fortum, Uniper and the biogas producer Nature Energy in 2025. Fortum's and Uniper's role in the plan is to supply green hydrogen produced at a new electrolysis plant. In June 2020, Uniper signed a cooperation agreement with General Electric (GE) aiming at decarbonising Uniper's gas-fired power plants and gas storage sites in the UK and the Netherlands with GE technology, including increasing the use of hydrogen in gas turbines and compressors. Uniper also decided to deepen cooperation with Siemens aiming at decarbonising Uniper's power generation by using green hydrogen. In November 2020, Uniper became a member of Oil and Gas Methane Partnership (OGMP) 2.0, a voluntary initiative to help oil and gas companies report and reduce methane emissions. In February 2021, Uniper announced it is investigating the possibilities of large-scale production of green hydrogen at the Maasvlakte area in Rotterdam, the Netherlands, together with the Port of Rotterdam Authority.
 7 AFFORDABLE AND CLEAN ENERGY	7 AFFORDABLE AND CLEAN ENERGY	<p>Fortum offers and develops affordable and reliable energy solutions for customers, improves the energy efficiency of production, and invests in renewable energy, e.g. solar power in India and Russia, and wind power in Russia and the Nordic countries.</p> <ul style="list-style-type: none"> In the first half of 2020, three new wind power farms in the Rostov region, Russia, started operation under the Fortum-Rusnano wind investment fund. In December 2020, three additional new wind power farms in Kalmykia, as well as the first stage of a wind power farm in the Rostov region, started operation, increasing the wind portfolio to 600 MW. Additionally, wind power projects with a total capacity of 495 MW are under construction. To assist customers in their decarbonisation efforts, the Fortum–Rusnano wind investment fund signed green energy supply agreements with the Russian Sberbank and the French company Air Liquide. Fortum completed the construction of two new wind power farms in the Nordics: the 99-MW wind power plant in Sørfjord, Norway, and the 90-MW wind power plant in Kalax, Finland. During the next five years, Fortum will invest EUR 3 billion in new growth projects, out of which 70% will be targeted at solar and wind power as well as hydrogen. A new biomass-fired heat plant, with a maximum heat output of 58 MW, was commissioned in the area of the existing Kivenlahti site in Espoo, Finland, in summer 2020. The bio-fuelled heat plant replaces one of the two coal-fired units in the Suomenoja power plant, supporting the Espoo Clean Heat project. Fortum initiated an Environmental Impact Assessment procedure for the Loviisa nuclear power plant to collect data for a possible new operating license application. The power plant is in good shape to meet the current safety requirements and to continue producing CO₂-free electricity. Fortum eNext commissioned a massive turbine revision project at the Keljonlahti CHP plant in Jyväskylä, Finland. After the overhaul, the total expansion efficiency of the turbine increased by more than 4%, which can be considered a significant energy-efficiency improvement.

Year 2020 in short

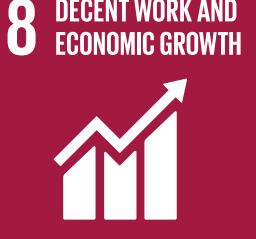
Strategy and carbon roadmap

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Sustainable Development Goal (SDG)	Fortum and SDG	Measure
6 CLEAN WATER AND SANITATION 	6 CLEAN WATER AND SANITATION	<p>Fortum aims to reduce the environmental impacts of its own operations on aquatic and terrestrial ecosystems and biodiversity. Fortum prevents customers' hazardous substances from ending up in water and land areas, and treats contaminated materials safely.</p> <ul style="list-style-type: none"> Fortum offers services to customers for the treatment, analysis, purification, and utilisation of their waste and sludge waters and other severely polluted waters. Fortum Waste Solutions in Sweden has – in close collaboration with the mining company LKAB, and RISE, Research Institutes of Sweden – developed a process water purification method based on a combination of surfactant filters and microbes that both purify water and enable its reuse. With the help of microbes, nitrate and sulphate are removed while surfactant filters remove the uranium. Fortum set a new biodiversity target, aiming for at least 12 major voluntary measures that enhance biodiversity to be implemented in 2021. Fortum implemented voluntary hydropower environmental projects valued at more than EUR 680,000, excluding Uniper. Fortum restored an island in the River Vuoksi in Finland to a shallow river habitat for trout and grayling, in cooperation with the municipality of Imatra and local environmental and fish authorities. Fortum installed a fish transportation system, called Whooshh, at the Forshaga power plant on the River Klarälven in Sweden. The system enables the smooth transportation of salmon and trout from a trap to a truck and further to upstream spawning areas. Uniper carried out several voluntary environmental measures with cooperation partners. These measures included the removal of the dam in Marieberg, Sweden, to enhance the connectivity and to restore river habitats and, at the Litzauer Schleife (Litzau Loop) nature reserve in Germany, the upgrading of habitats for fish and birds and creating spawning grounds for fish.
15 LIFE ON LAND 	15 LIFE ON LAND	
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	<p>Fortum focuses on a circular economy and resource efficiency. Fortum offers solutions to promote waste material recycling and reuse, and promotes efficient incineration as well as safe final disposal of waste.</p> <ul style="list-style-type: none"> In March 2020, three companies – Fortum, BASF, a chemistry company producing battery materials, and Nornickel, a mining and metallurgical company – signed a cooperation agreement on battery recycling. The plan is to build a battery recycling cluster in Harjavalta, Finland. In November 2020, Fortum announced it had developed and patented new, efficient technology to recover lithium, one of the most valuable components of lithium-ion batteries used in EVs, and is now able to produce battery-grade material on an industrial scale. In January 2021, Fortum announced plans to expand its EV battery recycling operations with a new mechanical process line in Ikaalinen, Finland. Fortum and Veidekke, a company offering ballast products and efficient mass management solutions, are collaborating on cleaning sand and gravel in Sweden. The process enables a 60–90% recovery rate of the contaminated materials that today end up in landfills. As much as 99.5% of the contaminants in sand can be cleaned with Fortum MOPS technology in Denmark.
Personnel and society		
11 SUSTAINABLE CITIES AND COMMUNITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES	<p>Fortum impacts urban air quality by reducing flue-gas emissions at power plants. Fortum also develops flexible and low-CO₂ district heating and cooling solutions, and develops e-mobility charging solutions.</p> <ul style="list-style-type: none"> The share of excess heat in Fortum's district heating (DH) network in Espoo, Finland, increased as a result of the Finnish mobile network operator Elisa's decision to recycle its new data center's excess heat. Fortum eNext was contracted to carry out the design, installation, and operation of a new district heating network in Dublin, Ireland. The network will use excess heat from Amazon Web Services' new data center to provide low-carbon heat to the public sector and to residential and commercial customers. Uniper Wärme GmbH (UWG) signed a Letter of Intent (LoI) with Ruhr Oel GmbH - BP Gelsenkirchen, Germany, for the purpose of using industrial excess heat from BP's refinery in Uniper's DH network. Fortum is piloting the use of satellite imagery in DH network leak detection in Espoo, Finland. The pilot, launched in partnership with Advian Oy, a data analytics company, surveys how digitalisation can add value to DH predictive maintenance processes. Fortum partnered with Infracapital, the infrastructure equity investment arm of a European savings and investments company, to speed up EV charging infrastructure development and growth in the Nordics.
8 DECENT WORK AND ECONOMIC GROWTH 	8 DECENT WORK AND ECONOMIC GROWTH	<p>Fortum promotes the good working conditions and safety of its own and contractors' employees, and requires service and goods suppliers to respect labour rights and adhere to anti-corruption principles.</p> <p>Fortum generates economic added value for its investors, suppliers and the public sector.</p> <ul style="list-style-type: none"> In 2020 Fortum, excluding Uniper, conducted four on-site and two remote supplier audits covering, e.g., working conditions. Both Fortum and Uniper are members of the Bettercoal Initiative and use the Bettercoal tools to improve sustainability in the coal supply chain. After a follow-up on-site evaluation mission to Loviisa Nuclear Power Plant (NPP) in Finland in February 2020, the Operational Safety Review Team of the International Atomic Energy Agency (IAEA) was pleased to conclude that the operator of Loviisa NPP has improved the operational safety of the plant in many areas, e.g. severe accident management and emergency preparedness, since the last evaluation mission in 2018. Fortum, excluding Uniper, created a concept for virtual safety walks to replace physical visits at the sites, the goal being to reinforce positive safety behaviour and raise safety awareness. In addition, guidelines for safe remote working were issued, including tips on how to ensure fire safety at home. In 2020, Fortum's taxes borne were EUR 665 million.

Year 2020 in short

Strategy and carbon roadmap

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Sustainable Development Goal (SDG)	Fortum and SDG	Measure
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	<p>Fortum advances innovations related to energy, clean hydrogen, digitalisation, circular economy, biomaterials, and electricity storage solutions. Fortum also invests in start-ups and creates partnerships to gain synergy and scale.</p> <ul style="list-style-type: none"> In April 2020, Fortum launched an innovation to fight the Covid-19 pandemic: Fortum Vipu, a sustainable hands-free door handle made of Fortum Circo® recycled plastic. A few months later, Vipu proceeded to commercial production and sales through collaboration between Fortum and the Finnish Fiskars Group. In May 2020, Fortum and the Finnish electricity network company Elenia commissioned a jointly developed battery pack; and later on in August, Fortum and the electricity distribution company Caruna launched a giant battery in Inkoo, Finland, as part of Fortum's virtual battery. Uniper plans to test a combination of hydropower and large-scale battery technology at two of its hydropower plants in northern Sweden. eFleety, an internal Fortum start-up currently operating as a part of Valkea Growth Club in the electric forklift battery management business, completed its first customer deal. eFleety also signed an exclusive partnership with Logisnext Finland. Fortum and Massachusetts Institute of Technology (MIT) in the US have started a 3-year cooperation project to create an open source tool for techno-economic modelling of small modular reactor (SMR) nuclear projects. In addition, Fortum, the Estonian Fermi Energia, and the Belgian engineering company Tractebel signed MoUs to start enhanced cooperation on studying SMR deployment in Estonia. Fortum and Chempolis, a technology company specialised in the fractionation of biomass, signed a collaboration agreement to perform test runs of straw-based cellulose, hemicellulose and lignin samples at Chempolis's test facility in Oulu, Finland. Fortum and Metsä Group, a Finnish forest products company, launched a joint EUR 50 million R&D programme called ExpandFibre. Fortum tested the use of recycled salt in gravelled-road dust binding in Finland. The salt originates from ash generated at Fortum's waste incineration plants. Uniper, together with the start-up Poligy is testing a method for climate-neutral power generation at Uniper's plants. The process includes a newly developed bipolymer, which forms a two-layer plastic strip that absorbs excess heat in order to first convert it into kinetic energy and then into electrical energy. Uniper signed an LOI with several partners on a feasibility study for the production and handling of climate-friendly sponge iron for steel production. The use of sponge iron, with hydrogen used in the production process, could reduce the CO₂ emissions of future steel production by up to 95% if it replaces the traditional blast furnace converter route.
5 GENDER EQUALITY 	5 GENDER EQUALITY	<p>Fortum supports workplace diversity and provides equal opportunities to its personnel.</p> <ul style="list-style-type: none"> Fortum and Uniper are both participants in the Equal by 30 campaign, a global effort to reach gender parity in the energy sector by 2030. The share of women in Fortum's management in 2020 was 27%. In Sweden, Fortum, excluding Uniper, participated in the Female Leader Engineer programme aiming for gender equality in engineer-intensive sectors. Uniper joined the Komm, mach MINT initiative supported by the German Federal Ministry of Education and Research. It promotes young women in mathematics, information technology, natural sciences, and technology studies and professions. In Sweden, Uniper is sponsoring for Kraftkvinnorna, Powerwoman of the year event and Women in Nuclear association as well as participating on BRIP, an induction programme for young females in the energy sector.
17 PARTNERSHIPS FOR THE GOALS 	17 PARTNERSHIPS FOR THE GOALS	<p>Fortum cooperates with many civil society organisations in its operating countries. In addition, Fortum has joint projects with cities, municipalities, and universities.</p> <ul style="list-style-type: none"> In 2020, Fortum reformulated its way of cooperating with local communities. This was done by structuring Fortum's societal actions within the framework of a new Corporate Social Responsibility (CSR) programme. In 2020, Fortum, excluding Uniper, started cooperation with three Finnish, three Russian, two Swedish, and two Norwegian organisations during the exceptional times of the Covid-19 pandemic, with a total contribution of EUR 315,000. Fortum supported local communities in Poland, Latvia, and India in their Covid-19 response by providing medical equipment and materials (e.g. gloves, face masks, and sanitisers) for the communities and local healthcare units. In Germany, Uniper provided more than 5,000 mouth and nose protectors to the Rheinbahn's public transport and donated a proportion of the production costs for each protector to benefit the SOS-Kinderdorf (Children's Village) Düsseldorf. In December 2020, an initiative called The Polar Express Arrives In Düsseldorf, organised and funded by Uniper works councils and employees, enabled Christmas presents to be delivered to local children whose parents face financial difficulties due to the pandemic. Uniper launched Debate.Energy to bring together diverse and controversial opinions from the politics, science, and industry arenas, as well as from wider society through one communication platform.

Case | Fortum promoting the sustainability of EV batteries

Electrification of transportation plays an important role in mitigating global Greenhouse Gas (GHG) emissions when a traditional combustion engine is replaced with an electric equivalent. The growth in the number of electric vehicles (EVs) on roads is driving the exponentially growing global demand for lithium-ion batteries. According to a forecast by the International Energy Agency, the number of EVs on the world's roads will increase from three million to 125 million by 2030.

Production of EV batteries raises concerns

The metals, including lithium, cobalt, nickel and manganese, currently used for EV battery manufacturing, are mainly processed from primary raw materials. However, the energy-intensive processes required for manufacturing battery chemicals from primary sources account for substantial GHG emissions. In addition, the availability and sustainability of primary battery raw materials raises serious concerns. Therefore, the battery industry and EV manufacturers are urgently seeking innovative solutions for more sustainable battery raw material sourcing and manufacturing.

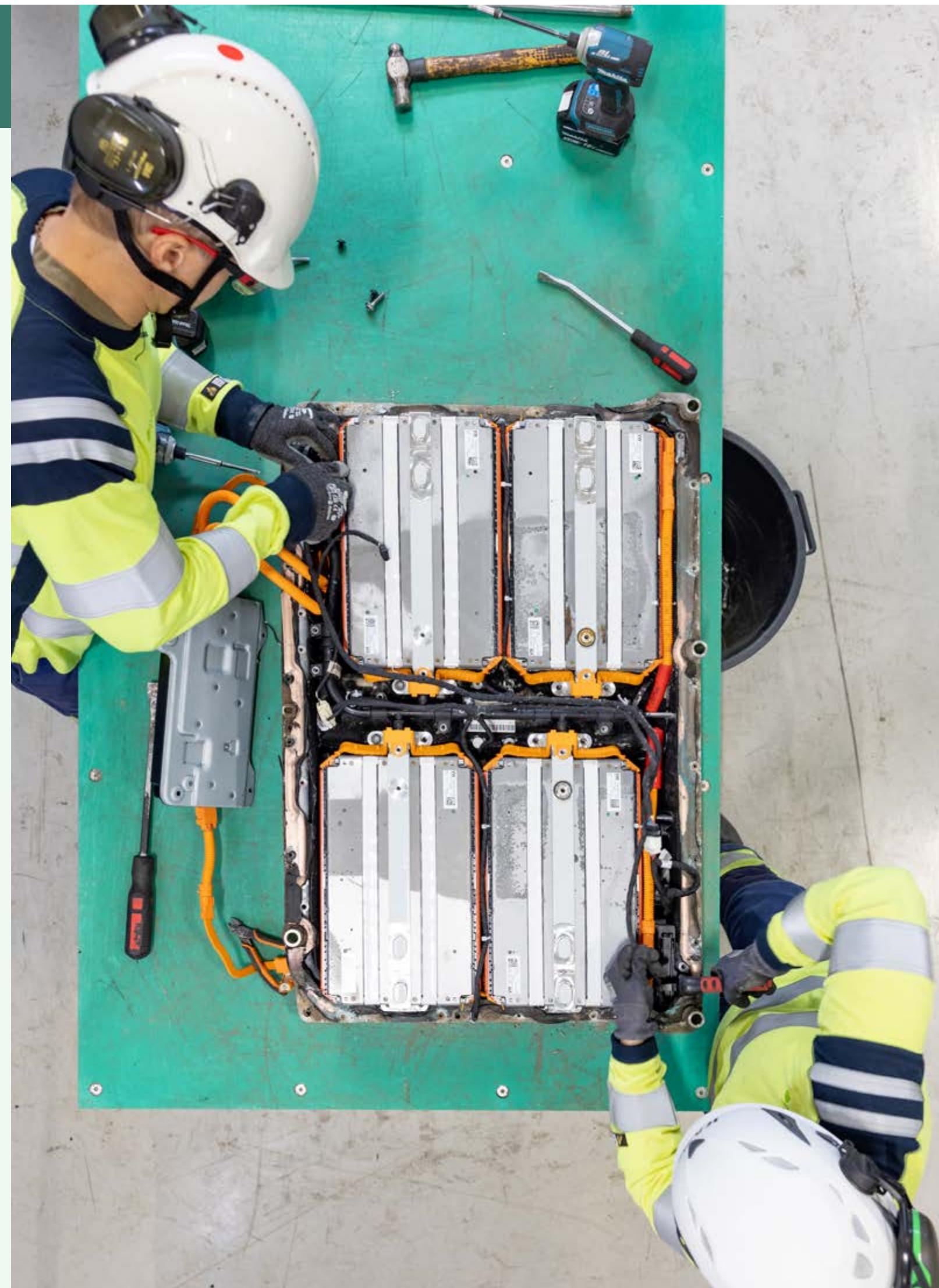
Fortum as part of the solution

Fortum took major steps with sustainable battery recycling technology in 2020 as a member of the BATCircle research programme, a circular ecosystem of battery metals consortium based in Finland. Fortum Recycling & Waste has an existing industrial-scale pilot facility in Harjavalta, Finland, producing sustainable metals from secondary, i.e. recycled resources. In addition, plans to build a large-scale commercial facility for recycling EV battery materials are underway. Fortum operates inside an industrial park, in Harjavalta, where BASF is building a battery materials precursor plant and Nornickel is refining metal raw materials – creating a unique material cluster on a European scale.

Fortum's planned recycling facility will utilise novel hydrometallurgical metals recovery technology developed by Crisolteq, a Fortum-owned company. The idea is to recycle valuable battery materials and return them to new battery production. The principal products of the new plant will include nickel sulphate, cobalt sulphate, manganese sulphate and lithium hydroxide. These are used for the production of precursors for cathode active materials (pCAM), components needed to produce cells for EV batteries.

Other European operators that recycle battery metals often do it by smelting, which results in lower material recovery rates. Fortum's technology, however, is an innovative combination of mechanical and hydrometallurgical recycling. In the hydrometallurgical process Fortum reaches a recovery rate of up to 95% of the scarce metals included in the battery black mass. In addition to replacing valuable virgin raw materials with efficiently recycled ones, the expected CO₂ emission avoidance of Fortum's process is substantial.

When both the electricity used by an EV is CO₂-free and its battery is produced by using a low-CO₂ technology, then the climate benefits of the vehicle are truly raised to the next level.



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Sustainability priorities

Sustainability priorities have been defined to support sustainable business. In our operations, we take into consideration climate and resource issues as well as our impacts on personnel and society.

As a result of Uniper consolidation, Fortum reassessed its sustainability priorities in 2020. Fortum's sustainability materiality assessment was originally conducted in 2019, and the 2020 reassessment was based on a desk-top review following the same methodology Uniper applies. Details of Uniper's methodology are available in Uniper's Combined Separate Non-Financial Report 2020.

Fortum's 2020 materiality assessment applied a two-dimensional approach. It considered the sustainability impacts of the company's business activities on a number of sustainability issues as well as the impacts of these issues on Fortum. The issues analysed were those found as the most important ones in [► Fortum's 2019 sustainability materiality assessment](#).

The expectations of important stakeholder groups, such as policymakers, competitors and peers, non-governmental organisations (NGOs), and the financial market, were also taken into account. In addition, the assessment analysed whether the material issues correlate with one or more of the UN Sustainable Development Goals.



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In the end, the 2020 sustainability materiality assessment results of the two companies, Fortum and Uniper, were combined with an equal weight. The sustainability priorities for Fortum in 2020 are shown in the table below.

Fortum sustainability priorities

Climate and resources	Personnel and society
Climate change and GHG emissions	Employee wellbeing, health and safety
Emissions to air, land and water	Business ethics and compliance
Energy efficiency	Corporate governance
Security of supply	Labour rights
Water use	Human rights
Biodiversity	Diversity and equal opportunity
Circular economy	Innovation and digitalisation
	Stakeholder engagement
	Economic value creation
	Customer rights and satisfaction

Sustainability targets affect every Fortum employee

Sustainability targets affect every Fortum employee, and safety-related targets are part of Fortum's short-term incentive (STI) programme. In addition to the Group-level targets, divisions have their own targets. Fortum's Board of Directors annually decides on the Group-level sustainability targets to be included in the incentive programme. Realisation of the safety target, Lost Time Injury Frequency (LTIF) for own personnel and contractors, is a part of Fortum's STI programme. However, the Board can, at its discretion, also take into consideration in the result other safety-related incidents and especially the number of severe occupational accidents. The target for severe occupational accidents is zero. In 2020, one severe occupational accident took place in Fortum's operations in Germany.

The 2021 STI programme remains unchanged in terms of the safety target (LTIF). Likewise, as in 2020, the Board has the option to take into consideration also other safety incidents. The weight of the target in the incentive programme is 10% (2020: 10%).

Fortum's long-term incentive (LTI) programme includes a climate-related metric. In the 2020–2022 LTI plan, the target is related to the reduction of Fortum's CO₂ emissions aligned with Fortum's strategy. In the 2021–2023 LTI plan, the target is linked to the reduction of Fortum's coal-fired power generation capacity in line with Fortum's coal-exit path.

Both STI and LTI targets are applicable to Fortum, excluding Uniper. Uniper continues to follow its own STI and LTI plans.



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Reporting principles

We report on sustainability in this Sustainability Report. Non-financial reporting, in line with the Accounting Act, is included in the Operating and Financial Review in the Financials. Additionally, we describe sustainability-related governance practices in the Corporate Governance Statement, and strategy and the CEO's view in the CEO's Business Review. Our reporting entity also includes the Tax Footprint.

We apply the specific disclosures of the GRI Sustainability Reporting Standards we have identified as material.

We gain information about our stakeholders' views through the One Fortum Survey and other stakeholder collaboration. Our selection of sustainability priorities is based on the materiality analysis conducted in 2020. We report sustainability information annually in Finnish and English. In our annual reporting we describe Fortum's operations in 2020 as well as some information from January–March 2021.

The previous reporting was published in March 2020, and our next reporting will be published in spring 2022. In addition to the annual reporting, we report on our sustainability activities in Fortum's interim reports.


This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.



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Reporting scope and boundaries

As the majority owner of Uniper, Fortum has consolidated Uniper as a subsidiary as of 31 March 2020. Reported figures are for Fortum, including Uniper, unless otherwise stated. Environmental indicators have been mainly consolidated as 75% of Uniper's total figures in 2020, except direct CO₂ emissions and energy production volumes are consolidated as of 31 March 2020. Social indicators are mainly consolidated at year-end, except employee turnover, personnel expenses and safety figures, which have been consolidated as of 31 March 2020. Although Uniper is a subsidiary of Fortum, it still is a separate company, listed in Germany, and therefore has its own sustainability processes, approach and standalone sustainability reporting.

In this Sustainability Report, selected sustainability key performance indicators that include Uniper are disclosed. No historical figures have been restated, unless otherwise stated. Indicators following the same calculation principles have been consolidated and are disclosed as one figure representing Fortum Group. In cases where the definitions currently differ, two KPIs are presented: one for Fortum, excluding Uniper, and one for Uniper.

Fortum's sustainability reporting covers functions under Fortum's operational control, including subsidiaries in all its operating countries, if not otherwise stated. The figures for power and heat generation and capacities also include figures from Fortum's share in associated companies and joint ventures that sell their production to the owners at cost. Possible deviations to these principles are reported in conjunction with information applying different boundaries. A list of Fortum's subsidiaries is included in the Financial Statements Note 39 Group companies by segment on 31 December 2020. Uniper is consolidated in the Financials 2020 as a subsidiary.

Information from previous years is mainly presented on the basis of the organisation and the functions of each year; the impacts of ownership changes in production facilities, for example, have not been updated afterwards in the previous figures.

Capacity changes

Consolidation of Uniper's capacity increased Fortum's power generation by about 36.2 GW and heat and steam production by about 4.9 GW. Uniper has power generation capacity in Germany, Russia, the United Kingdom, Sweden, the Netherlands and Hungary, as well as heat and steam production capacity mainly in Germany, Russia, and the Netherlands.

In summer 2020, Fortum commissioned the Kivenlahti bio-fuelled heat plant, which has a maximum heat output of 58 MW, in Espoo, Finland.

In Finland, Fortum concluded the sale of its district heating business in Joensuu at the beginning of 2020 and its district heating business in Järvenpää in August 2020. As a result of these sales, the capacity of power generation decreased by about 70 MW and heat production by about 600 MW. In March 2021, Fortum also announced the sale of its district heating business in the Baltic countries.

Measurement and calculation principles

Data for economic performance indicators are collected from the audited Financial Statements and from financial accounting and consolidation systems.

The Sustainability Report's environmental information covers the plants for which Fortum is the legal holder of the environmental permit. In such cases, the plant information is reported in its entirety.

Fortum, excluding Uniper, utilises a database with instructions for collecting site-level environmental data. Uniper utilises its own data gathering spreadsheets and system. Sites are responsible for data input, emissions calculations, and the accuracy of the information provided. The Corporate Sustainability unit compiles the data at the Group-level and is responsible for the disclosed sustainability information.

Fortum's CO₂ emissions subject to the EU emissions trading system (EU ETS) are annually verified at the site level by external verifiers. Direct and indirect greenhouse gas emissions have been reported in accordance with the Greenhouse Gas (GHG) Protocol on the basis of the Greenhouse Gas Analysis performed by an external consultant.

Fortum's, excluding Uniper, human resources (HR) management system is used in all Fortum's operating countries and is the main

system for gathering employee related data. In addition, Russian operations have their own, local data system. Other social responsibility data, such as occupational safety and health-related data, originates from various data systems. Uniper utilises its own systems for gathering HR and other social responsibility data. Designated individuals collect the information and deliver it to the Corporate Sustainability unit primarily in the format recommended by the GRI Standards.

► Financials 2020

Assurance

Deloitte Oy has provided limited assurance in accordance with ISAE 3410 for the reporting period of 1 January 2020 to 31 December 2020 on GHG emissions calculations (Scope 1, 2 and 3) based on the Greenhouse Gas (GHG) Protocol.

Global Compact and Caring for Climate reporting

Fortum has been a participant of the United Nations Global Compact initiative since 2010. Uniper follows the ten principles of the UN Global Compact, but is not a formal participant.

In this 2020 Sustainability Report, we describe the realisation of the Ten Principles of the Global Compact initiative in our operations in the sections **► Climate and resources**, **► Personnel and society**, and **► Business ethics and compliance**. We use the GRI Sustainability Reporting Standards disclosures to measure compliance with the principles of human rights, labour standards, the environment, and anti-corruption.

Fortum joined the UN Caring for Climate initiative in 2013. Fortum meets the reporting requirements of the Caring for Climate initiative by annually participating in the assessment in the CDP Climate Change questionnaire and by publishing its response on the CDP website.

Business ethics and compliance

We believe there is a clear connection between high standards of ethical business practices and excellent financial results. As an industry leader, we obey the law, we embrace the spirit of integrity, and we uphold ethical business conduct wherever we operate.

Codes of Conduct set the basic requirements

The Fortum Code of Conduct and Uniper Code of Conduct are based on similar fundaments, and they establish the basic principles of conduct that everyone must follow. They define how we treat each other, do business, and engage with the world. The Supplier Codes of Conduct, both based on the ten principles of UN Global Compact, outline the requirements for Fortum's and Uniper's suppliers and business partners.

Fortum's Board of Directors has approved the company's Code of Conduct and Supplier Code of Conduct. Uniper's Code of Conduct and Supplier Code of Conduct have been approved by the Uniper Management Board.

The Codes of Conduct are regularly reviewed in order to ensure compliance with evolving company and regulatory requirements. Fortum's Code of Conduct and Supplier Code of Conduct were updated during 2020 and published in early 2021. Training on the updated Codes will be organised during 2021. The Code of Conduct online training is mandatory for all employees. Uniper's updated Code of Conduct was released in early 2020. Uniper seeks to make all compliance and Code of Conduct training mandatory for all employees starting in 2021. In addition, relevant individuals are regularly trained in policies and systems that prevent e.g. corruption.

In line with the Codes of Conduct, Fortum and Uniper have zero tolerance for corruption and fraud and do not award donations to political parties or political activities, religious organisations, authorities, municipalities, or local administrations. In addition, separate instructions and guidelines have been created to address, e.g., anti-bribery, compliance management, the safeguarding of company assets, conflicts of interest, anti-money laundering, and competition law. Fortum also

requires its goods and service suppliers as well as its business partners to comply with a zero-tolerance policy towards corruption and bribery.

Compliance-risks

The compliance risks related to our business operations include the potential risk of bribery or corruption, fraud and embezzlement, noncompliance with legislation or company rules, conflicts of interest, improper use of company assets, and regulatory compliance. Compliance risk management is an integrated part of business operations. Key compliance risks, including action plans, are identified, assessed, and reported annually. This applies also to the management of risks related to sustainability. Both Fortum and Uniper have in place a compliance management system (CMS) to mitigate risks.

Training

Training is a fundamental part of Fortum's compliance management. Fortum, excluding Uniper, provides training on the Market Abuse Regulation, including insider regulations, as well as training on competition law issues for newly hired individuals who need it based on their roles. In 2020, dedicated training sessions were organised for key Consumer Solutions personnel; the training focused on the most important compliance aspects in the Consumer Solutions business.

Uniper provided an online training module on preventing bribery, corruption, and money laundering, and on reinforcing awareness of whistleblowing for employees in roles most likely to expose them to such risks.

Reporting misconduct

Internal and external reporting channels are offered for reporting suspicions of misconduct. The channels are described in the Codes of Conduct and accessible on the companies' internal and external websites. Fortum, excluding Uniper, uses an external service provider's "SpeakUp" channel for reporting. The same channel is used for reporting any suspected misconduct relating to the environment, labour practices, or human rights violations, and it is available to all

stakeholders. In Russia, Fortum, excluding Uniper, has a separate compliance organisation in place, and employees there are encouraged to use the channels provided by the compliance organisation. However, they can also use the "SpeakUp" channel.

Suspected misconduct and measures related to ethical business practices and compliance with regulations are regularly monitored and assessed by Fortum's Audit and Risk Committee. Uniper's Compliance Management System includes quarterly compliance reports to the Uniper Management Board. Uniper's Audit and Risk Committee monitors compliance issues on a regular basis. Uniper Management Board's Compliance Commitment is published annually on the company's website in accordance with the German Governance Code.

Suspected cases of misconduct

For Fortum, excluding Uniper, a total of 94 cases of suspected misconduct were reviewed and closed during 2020. There was no cause for action to be taken in 31 of the cases investigated. As a result of the investigations, three employment contracts were terminated and eight written warnings were given.

More than 60% of the investigated cases were related to noncompliance with company rules. In these cases, corrective action was taken by reviewing and developing existing processes and instructions and by providing training for employees.

Fortum has zero tolerance towards alcohol and drug use, and thousands of random breathalyser tests are conducted annually. For Fortum, excluding Uniper, three cases related to alcohol or drug use during working hours were identified.

During 2020, one case of corruption or bribery was confirmed in Fortum's, excluding Uniper, operations. Two instances of alleged corruption and bribery were reported at Uniper during the year. One case is pending; the other was closed as unfounded. We deal with potential cases of corruption in a professional manner, in accordance with the defined compliance investigation process, in line with applicable laws, and with respect to the rights and personal integrity of all parties involved.

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Restricting competition

For Fortum, excluding Uniper, there were no cases related to restricting competition reported during the year.

Significant fines

There were no significant fines issued in Fortum's operations during the year. The police investigation regarding a possible environmental violation at a waste incineration and treatment site initiated in Sweden in 2018 was still ongoing. In 2020, one new police investigation was initiated regarding a breach of the minimum discharge limit from the dam at Fortum's hydropower plant in Sweden.

Environmental enquiries and grievances

Power plants receive environmental enquiries and other contacts every year, and they are mainly handled locally. The aim is to communicate in advance about upcoming measures that have possible environmental impacts, for example, through local media and at public events. The external grievance channels described above can also be used by stakeholders to report problems possibly caused by our operations. For Fortum, excluding Uniper, there was one environment-related grievance reported through these channels in 2020. The grievance was related to complaints addressing the permitting process.

- ▶ [Fortum Code of Conduct](#)
- ▶ [Fortum Supplier Code of Conduct](#)
- ▶ [Labour practices and human rights grievances](#)
- ▶ [Incidents of discrimination](#)



Climate and resources

Targets

CLIMATE:

- Reduction of CO₂ emissions (Scope 1 and 2) in European generation by at least 50% by 2030 (compared to base year 2019)
- Carbon neutral (Scope 1 and 2) in European generation by 2035 at the latest
- Carbon neutral globally (Scope 1, 2 and 3 GHG emissions), in line with the goals of the Paris Agreement, by 2050 at the latest

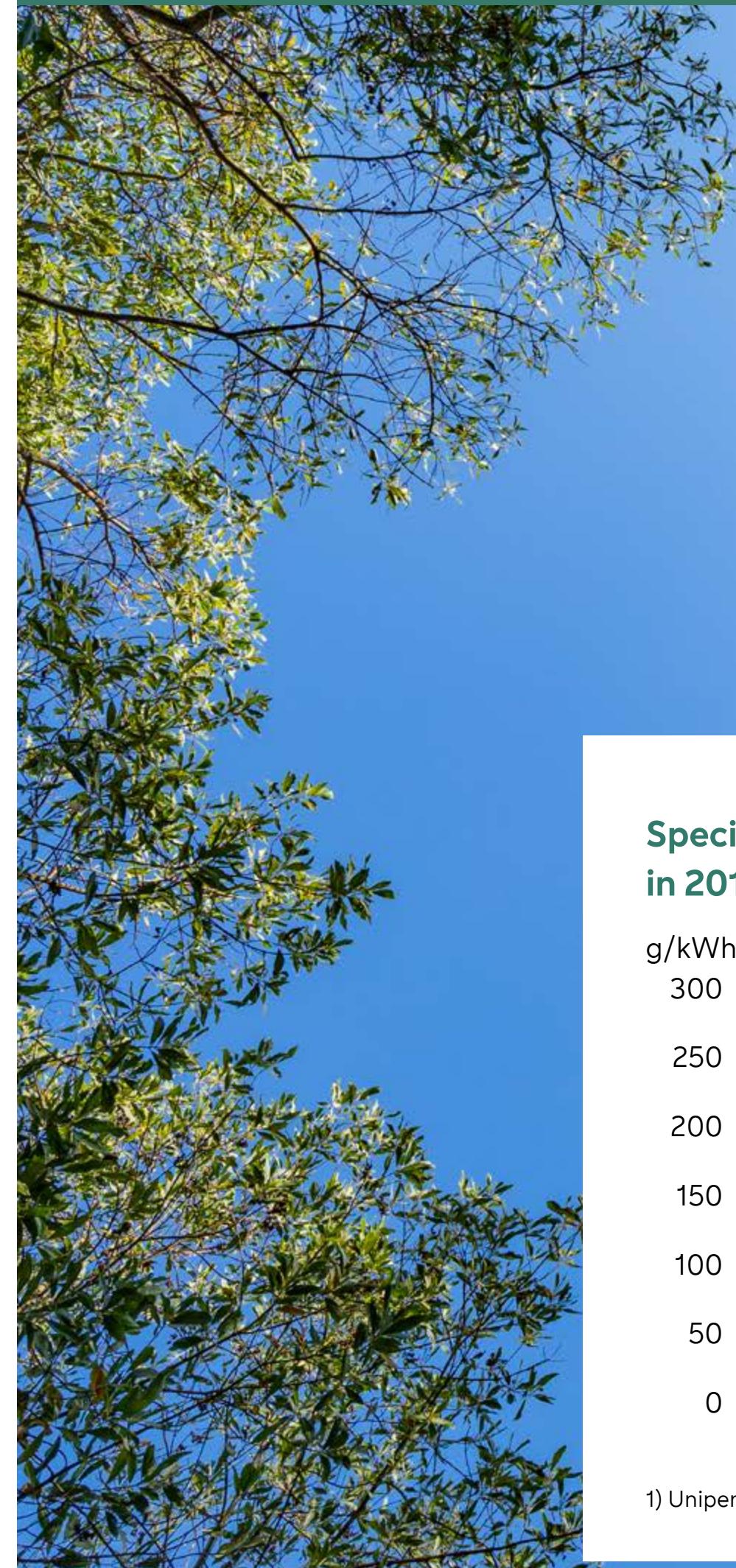
BIODIVERSITY:

- Number of major voluntary measures enhancing biodiversity ≥12 in 2021

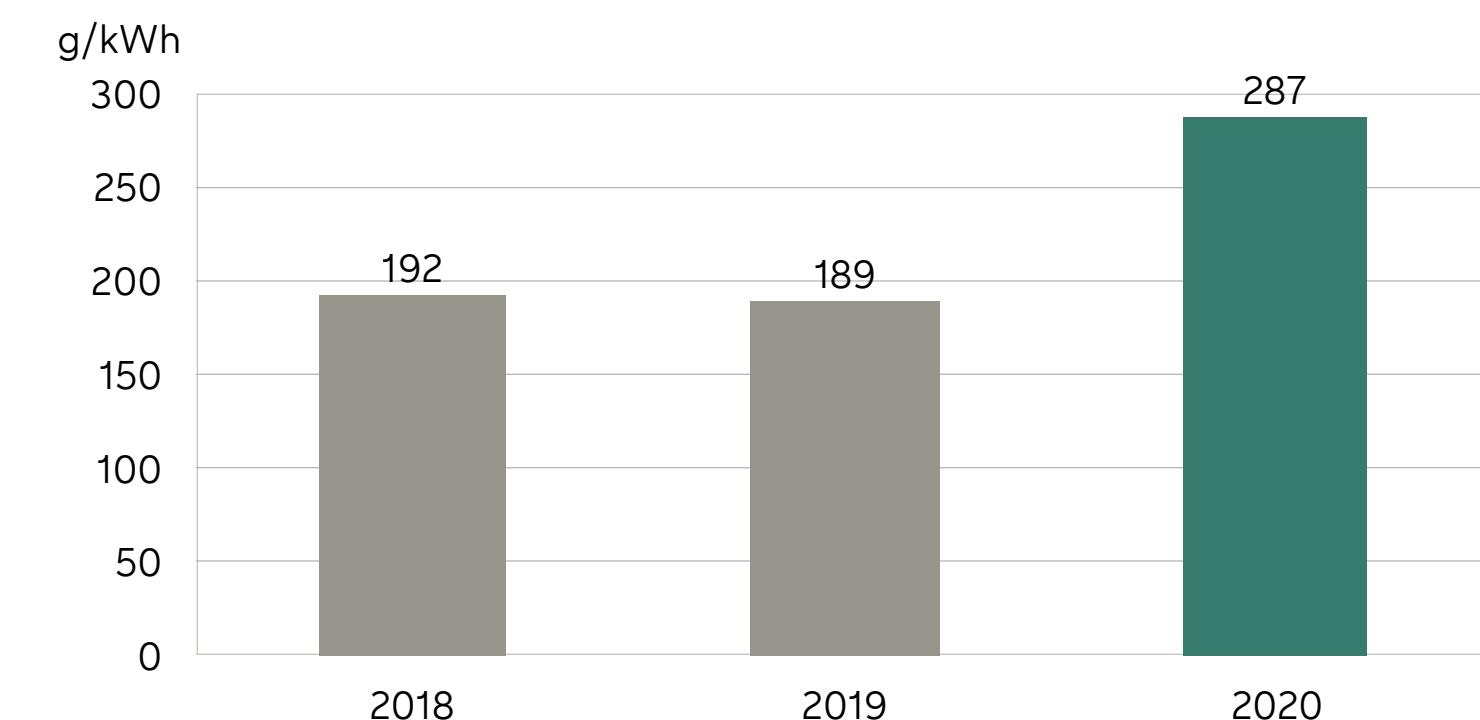
Contribution to the UN SDGs



Investments to CO₂-free production MEUR 372



Specific carbon dioxide emissions from total energy production in 2018–2020¹⁾



1) Uniper consolidated as of Q2/2020

Sustainability priorities related to climate and resources

In terms of Fortum's operations, the sustainability priorities related to climate and resources include:

- Climate change and GHG emissions
- Emissions to air, land and water
- Energy efficiency
- Security of supply
- Water use
- Biodiversity
- Circular economy

Some of the environmental impacts of energy production and fuel sales are global or wide-reaching, some are regional or local. We manage and mitigate our environmental impacts with environmental management systems. Calculated in terms of sales, 99.9% of Fortum's electricity and heat production globally were ISO 14001 environmentally certified at the end of 2020.

► Fortum's energy production, excluding Uniper

► Uniper's energy production

► Sustainable fuel purchasing

We measure the realisation of the environmental management with the key performance indicators, which are presented in the table.

Key performance indicators related to climate and resources¹⁾

	2020	2019	2018
ISO 14001-certified operations in energy production, % of sales	99.9	99.8	99.9
CO ₂ emissions from total energy production, million tonnes	48.7	19.1	20.1
Nitrogen oxide emissions, 1,000 tonnes	50.2	24.9	26.1
Sulphur dioxide emissions, 1,000 tonnes	17.9	14.9	16.8
Particle emissions, 1,000 tonnes	9.6	11.7	9.6
Specific CO ₂ emissions from total energy production, gCO ₂ /kWh	287	189	192
Share of CO ₂ -free energy production in power generation, %	45	59	57
Share of CO ₂ -free energy production in power generation in Europe, %	73	96	96
Energy-efficiency improvement, excluding Uniper, GWh/a	134	70	135
Energy availability of CHP plants, excluding Uniper, %	93.2	95.9	96.4
Asset availability of Uniper's power generation plants, % ²⁾	75.0	-	-
Water withdrawal for cooling, million m ³	4,967	1,975*	2,029*
Utilisation of ash generated at power and heat plants, %	69	48	51
Major EHS incidents, excluding Uniper, no. of which environmental permit violations, no.	16	11	18
	1	2	2

1) Uniper consolidated as of Q2/2020

2) The figure includes Uniper's power generation from gas and coal power plants from the second-quarter 2020.

* Calculation principle changed due to alignment with Uniper.



Energy

Fortum's purpose is to drive the change for a cleaner world. We want to enable the energy transition by providing customers and societies a reliable and affordable supply of low-carbon energy and sustainable solutions. In the future, the energy system – and Fortum's portfolio – will be based on renewable energy, increasingly clean gas (e.g., hydrogen) and nuclear power. By improving the energy efficiency of our power and heat production, we can also reduce flue-gas emissions to the environment relative to the produced energy and decrease production costs.

Energy production

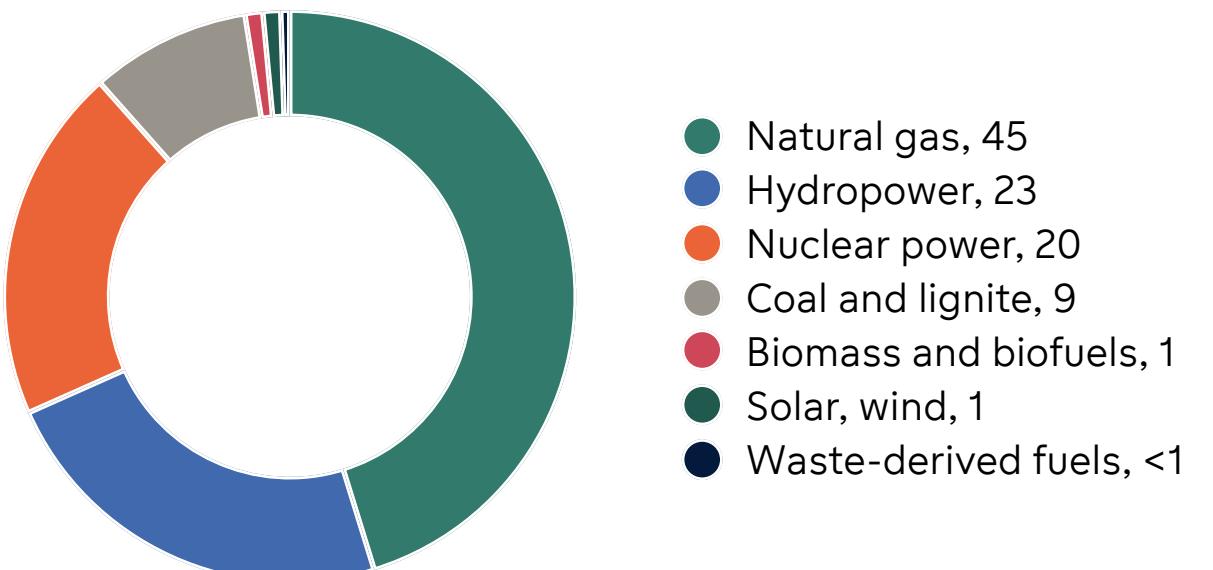
Fortum's power generation is mainly based on natural gas-fired generation, and carbon dioxide-free hydro and nuclear power. Fortum targets to reduce the share of coal in power generation rapidly. A minor share of Fortum's power generation is currently based on solar and wind, but Fortum targets significant growth in the area over the next five years.

Fortum is also a large producer of district heat. The heat is mainly produced at natural gas-fired and energy-efficient combined heat and power (CHP) plants.

Uniper has 36.2 GW of power generation capacity in Germany, Russia, the United Kingdom, Sweden, the Netherlands and Hungary, as well as 4.9 GW of heat and steam production capacity mainly in Germany, Russia and the Netherlands. In addition, Uniper operates a large commodities trading business and has natural gas storage sites, which play an important role in ensuring a secure and flexible gas supply.

Fortum's coal-fired Meri-Pori power plant was selected for 440 MW of power generation capacity for the national peak-load reserve capacity system in Finland from July 2020 to June 2022. The old coal-fired Zabrze and Bytom CHP plants in Poland have been

Power generation by energy source, %¹⁾



¹⁾ Uniper consolidated as of Q2/2020

decommissioned and will be removed completely from operating capacity after 2022.

In Finland, Fortum concluded the sale of its CHP plant and district heating network in Joensuu at the beginning of 2020, and its CHP plant and district heating network in Järvenpää in August 2020. In March 2021, Fortum also announced the sale of its district heating business in the Baltic countries. In the Baltics, Fortum has provided district heating in five cities: Tartu and Pärnu in Estonia, Jelgava and Daugavpils in Latvia, and Klaipeda in Lithuania.

In 2020, Fortum's power generation was 142.1 TWh and heat and steam production 29.6 TWh. 45% of our total power generation was CO₂-free. In Europe, 73% of our power generation was CO₂-free. The figures for power and heat generation also include figures from Fortum's share in associated companies and joint ventures that sell their production to the owners at cost.

Power generation by energy source in 2018–2020 (GRI 302-1)¹⁾

TWh	2020	2019	2018
Natural gas	64.3	28.3	28.4
Hydropower	32.5	20.3	19.1
Nuclear power	28.6	23.5	22.8
Coal and lignite	13.4	2.3	2.2
Solar, wind	1.1	0.7	0.8
Biomass and other biofuels	1.6	0.8	0.9
Waste-derived fuels	0.6	0.5	0.4
Other ²⁾	0.01	0.1	0.2
Total	142.1	76.3	74.6

¹⁾ Uniper consolidated as of Q2/2020

²⁾ Fuel oil, peat, other

Heat production by energy source in 2018–2020 (GRI 302-1)¹⁾

TWh	2020	2019	2018
Natural gas	16.6	15.6	19.2
Coal and lignite	7.7	4.7	4.7
Waste-derived fuels	2.6	2.6	2.0
Biomass and other biofuels	1.6	2.3	2.3
Heat pumps, electricity	0.8	0.6	0.9
Other ²⁾	0.3	0.5	0.6
Total	29.6	26.4	29.8

¹⁾ Uniper consolidated as of Q2/2020

²⁾ Fuel oil, peat, other

More renewable energy

In 2020, we made investment decisions and invested in new wind and solar power. Fortum commissioned the rest of the wind turbines at the 99-MW Sørkjord wind power park in Norway and also constructed the 90-MW Kalax wind power plant in Finland. Additionally, the 250-MW Jaisalmer solar power plant in Indian Rajasthan State was under construction in 2020. Fortum has a capital recycling business model in wind power plants in the Nordic countries and in solar power plants in India. Fortum retains a 20–44% minority ownership of wind and solar plants and also continues its responsibility for the construction and operation of the plants.

Fortum has 116 MW of solar power under construction in Russia. Additionally, the projects of the Fortum and Rusnano investment fund with 50/50 ownership are targeting 1,823 MW of new wind power capacity, of which 600 MW is already operational, 495 MW is under construction, and 728 MW is under development. A separate investment decision will be made for each project.

The refurbishments of Fortum's, excluding Uniper, own hydropower plants in Sweden and Finland produced 10 MW of new renewable electricity production capacity in 2020.

New low-carbon production

In summer 2020, Fortum replaced one of the two coal-fired units at Suomenoja power plant by commissioning the Kivenlahti bio-fuelled heat plant in Espoo, Finland. The maximum heat output of the plant is 58 MW. The Otaniemi geothermal plant and the new heat pump unit at the Suomenoja plant are estimated to be commissioned in 2021. Additionally, from 2021 onwards, Fortum is increasing its non-combustion-based heat production with large-scale air-to-water heat pumps, e.g., in Otaniemi and Vermo. Fortum has set a goal to discontinue the use of coal in Espoo in 2025. The project for carbon-neutrality in the 2020s is called [► Espoo Clean Heat](#).

Switch to green hydrogen and other clean gas

Clean gas will accelerate energy transition when, for example, green hydrogen or carbon-neutral methane is produced using renewable electricity in a technology known as [► power-to-gas \(P2G\)](#). P2G means that instead of taking the power generation from wind or solar power plants off-line during the oversupply of electricity, their output can be used to run on-site electrolysis equipment that produces green hydrogen (H_2) from water (H_2O) for injection into the gas pipeline system, for example. In addition to energy production, green hydrogen may be used in fuel cells to power vehicles.

Uniper has P2G pilot sites in Falkenhagen and in Hamburg, Germany. The Falkenhagen wind-to-gas site also uses CO_2 captured from a nearby bio-ethanol plant to transform the green hydrogen (H_2) into carbon-neutral methane (CH_4). Since natural gas contains mainly methane, green methane has the same chemical properties and, therefore, it can be stored in unlimited quantities in the gas pipeline system.

In early 2021, Uniper also announced the plans of large-scale production of green hydrogen at the Maasvlakte power plant in Rotterdam, the Netherlands. The aim is to realise a hydrogen plant on the site of Uniper by 2025 with a capacity of 100 MW and to eventually expand the capacity to 500 MW.

[► Fortum's energy production, excluding Uniper](#)

[► Uniper's energy production](#)



Energy efficiency

Improving energy efficiency at power plants refers to measures we implement to increase the efficiency of production processes or reduce the energy consumption of plants or equipment. This enables us to produce more electricity or heat for our customers without increasing fuel consumption. The energy efficiency of power plants can be increased through investments and technical improvements, preventive maintenance, and by training personnel in the optimal operation of the plant and in monitoring the plant's operating economy. Improving power plant availability also increases energy efficiency, as unplanned plant start-ups are reduced. Uniper's coal-fired and gas-fired power plants and gas storage sites in Germany are certified to the ISO 50001 Energy management system standard.

Energy-efficiency investments

In fuel-based energy production, Fortum aims to utilise the fuel's energy as efficiently as possible. One of our important means to improve the energy efficiency of fuel use is to increase combined heat and power (CHP) production. In CHP production, up to 90% of the energy content of the fuels can be utilised. The efficiency of separate electricity generation is about 40–60%.

Fortum invests refurbishments and modernisations at several power plants annually, which improves their energy efficiency and availability. By the end of 2020, Fortum's, excluding Uniper, cumulative energy-efficiency improvement achieved was about 1,840 GWh/a compared to 2020. In 2020, the combined energy savings of the energy-efficiency improvement projects was 134 GWh/a. As the definitions of energy-efficiency improvement vary from that of the rest of the Fortum Group, the results of Uniper's energy-efficiency improvement are not included in total energy-efficiency figures.

In 2020, Fortum's completed significant projects improving energy efficiency, including:

- heat recovery improvements at the Kivenlahti bioheat plant in Espoo, Finland, 48 GWh
- hydropower plant refurbishments in Sweden and Finland, 29 GWh
- upgrading of the steam turbines at the Tyumen CHP-2 plant in Russia, 23 GWh
- new heat exchanger at the Pärnu CHP plant in Estonia, 16 GWh
- renovation work of the heat network in Wrocław, Poland, about 10 GWh

Uniper is also investing in energy-efficiency improvement projects. During 2020–2021, for example, the new turbine installations in cooling water discharge will increase the net electricity output by about 1 MW at the 428-MW Gönyü CCGT (Combined Cycle Gas Turbine) power plant in Hungary. In 2021, projects to upgrade the gas turbine will also be implemented at the Gönyü power plant, aiming at, e.g., recovery of waste heat in air preheating.

Energy-efficiency services for homes and businesses

Fortum has introduced energy-efficiency services for private customers, for example, in Finland and Sweden. Fortum's customers can, for instance, monitor their electricity consumption with an in-home display or control and optimise the heating of their homes based on electricity price and use. Fortum's operation and maintenance services also have been improving the energy efficiency of its customers' power plants for decades.

- ▶ **Energy-efficiency services for homes**
- ▶ **Energy-efficiency services for businesses**



Fuel consumption

Fortum uses various fuels, such as natural gas, coal, lignite, uranium, biomass fuels and waste-derived fuels, to produce electricity, heat and steam. The most significant fuel used in our energy production is natural gas. We use natural gas in, among others, Russia, the United Kingdom, Germany, the Netherlands, and Hungary. In 2020, our use of natural gas was about 63% of our total fuel consumption globally.

Fortum uses hard coal and lignite in Germany, Russia, the Netherlands, Poland, Finland, and the United Kingdom. In 2020, in our energy production coal and lignite accounted for about 18% of our total fuel consumption.

In 2020, Russia's share of our total fuel consumption was about 57%. Russia accounted for about 83% of our use of natural gas.

Our use of nuclear fuel (i.e. uranium) was about 15% of our total fuel consumption. We used about 40 kilotonnes of nuclear fuel at the Loviisa nuclear power plant in Finland, and at the Oskarshamn 3 nuclear power plant in Sweden.

In 2020, Fortum used biomass and other biofuels in, among others, the Baltic countries, Finland, the Netherlands, Poland, and Norway. In Finland and Norway, Fortum uses biomass and other biofuels at bio-fuelled heat plants. Biomass also replaced partly the use of coal at the Maasvlakte 3 power plant in the Netherlands. In quarters two through four of 2020, the Maasvlakte plant incinerated about 430 kilotonnes of biomass, of which over 80% was wood pellets.

The energy-specific fuel consumption has been calculated based on the usage volumes and fuel-specific calorific values measured at the power plants. Uranium consumption has been calculated from the thermal heat generation in the reactors.

Energy intensity

In 2020, our fuel consumption in electricity, heat and steam production was a total of 252 TWh, or 908 PJ. With the fuel resources, we produced about 88 TWh of net electricity, and about 29 TWh of net heat and

steam. The total energy consumption, calculated as the difference between the fuel consumption and net energy production, was about 136 TWh, or 488 PJ.

In 2020, our average fuel use efficiency was 46%. The efficiency has been calculated by dividing the net energy produced with the energy content of the fuels used in the energy production.

The energy intensity of our own energy production was 1.7. The intensity figure has been calculated by dividing the amount of used fuel resources by the total net energy production, including also hydropower, solar and wind power globally.

► Origin of our fuels

Fuel use in 2018–2020, mass/volume (GRI 301-1)¹⁾

	2020	2019	2018
Non-renewable fuels			
Natural gas, million m ³	16,738	7,596	8,058
Coal and lignite, 1,000 t	8,782	1,888	1,782
Waste-derived fuels, fossil, 1,000 t	894	867	863
Peat, 1,000 t	42	154	221
Fuel oil, 1,000 t	24	14	16
Nuclear fuel, t	40	22	20
Renewable fuels			
Biomass and biofuels, 1,000 t	1,426	1,302	1,180
Waste-derived fuels, renewable, 1,000 t	527	513	589
Biogas, million m ³	1	3	3

1) Uniper consolidated as of Q2/2020

Fuel use in 2018–2020, energy (GRI 302-1)¹⁾

	2020	2019	2018
petajoules			
Natural gas	568.4	258.6	272.7
Coal and lignite	167.0	39.2	36.4
Nuclear fuel	138.8	84.2	91.4
Waste-derived fuels, fossil	9.7	8.8	8.8
Fuel oil	0.9	0.5	0.4
Peat	0.4	1.6	2.1
Non-renewable fuels			
	885.2	392.8	411.8
Biomass and biofuels	17.2	13.3	11.9
Waste-derived fuels, renewable	6.0	5.5	6.3
Renewable fuels			
	23.2	18.9	18.2
Fuels total			
	908.4	411.7	430.0

1) Uniper consolidated as of Q2/2020

Security of supply

A functional society requires an uninterrupted and reliable supply of energy. With hydropower, we are balancing the growing, but weather-dependent, fluctuating production of other renewable energy forms, like solar and wind, and we are enabling their growth. Hydropower's flexibility is needed to secure the functionality of the energy system and the power grid also during energy consumption peaks and to balance fluctuations in the price of electricity.

If a sufficient supply of hydropower is not available, adjustable power production based on natural gas can be used to balance fluctuations in solar and wind power production and to secure the supply of electricity. Uniper's gas-fired power plants can respond quickly to fluctuations in production, which is important for power grid stability, e.g., in Germany. Additionally, Uniper's natural gas supply, gas storage facilities, gas trading activities, and capacity for re-gasifying liquefied natural gas (LNG) enable a reliable and affordable supply of energy.

Uniper has about 7.6 bcm of underground gas storage capacity in Germany, Austria, and the United Kingdom. Gas storage facilities can store energy between seasonal variations, and storages can also respond to consumption demand peaks.

With planned preventive maintenance and condition monitoring, we ensure that our power plants operate reliably to produce the electricity, heat and steam customers need. Fortum also offers engineering services that help power plants improve their performance, including high availability.

Asset availability at a good level

We measure the availability of power and heat plants and hydropower plants with an energy availability indicator. In 2020, the energy availability of Fortum's CHP plants, excluding Uniper, was, on average, 93.2%. Energy availability is calculated by dividing the CHP plant's actual production in the period under review by the theoretical maximum production; planned maintenance outages are not included in the calculation. If the outage at a CHP plant is longer than planned,

it is considered a production interruption, which decreases the energy availability.

Uniper's definition of asset availability differs from that of the rest of the Fortum Group. The energy availability of Fortum's CHP plants, excluding Uniper, excludes planned maintenance outages, whereas Uniper's asset availability of power generation includes planned outages in addition to unplanned technical unavailability. The asset availability of Uniper's gas-fired and coal-fired power production plants was, on average, 75.0%. For Uniper this figure includes quarters two through four of 2020 only. Each unavailability-related case of equipment failure is investigated to determine the causes, so that similar problems can be prevented at other power plants.

Fortum's, excluding Uniper, energy availability of hydropower plants was about 99.5% in Finland and Sweden. For hydropower plants, outages due to a failure and unplanned or prolonged outages decrease the availability factor only, if they lead to spillage.

In 2020, the Loviisa nuclear power plant's load factor was 87.7%. The load factor describing the availability of the Loviisa nuclear power plant is among the best in the world for pressurised water reactor power plants. During the whole year 2020, the Oskarshamn 3 nuclear power plant's load factor was 65.0%. The Oskarshamn is the boiling water reactor power plant.



93.2%

Energy availability of CHP
plants, excluding Uniper

75.0%

Asset availability of Uniper's power
generation plants as of Q2/2020

Climate

Changes in our operating environment are driven by global megatrends that remain valid: climate change, technology development, active customers, and resource efficiency. Europe is aiming for climate neutrality by 2050, and Fortum has set its climate targets accordingly. Climate change mitigation and adaption require political commitment and ambitious actions from different players in society. Greenhouse gas emissions need to be reduced in all sectors, not just in electricity, but also, e.g., in heating, cooling, industry and transport. Electrification and sector integration mitigate climate change, when electricity, replacing other energy sources, is produced and supplied by low-emission and renewable energy sources. Transition to a low-emission power system also enables the decarbonisation of other sectors through the coupling of CO₂-free power generation and green hydrogen.

The following Climate section is ▶ **Fortum's Task Force on Climate-related Financial Disclosures (TCFD)** report.

In spring 2020, Fortum, excluding Uniper, published its first TCFD report and, in December 2020, Uniper committed to implement the TCFD requirements. As the implementation has only just begun, Uniper information is only partially included in Fortum's current TCFD reporting.

Governance

Sustainability is an integral part of Fortum's strategy. The highest decision-making authority on sustainability and climate-related matters is with the members of the Fortum Board of Directors, who share joint responsibility for these matters. The Board of Directors annually approves Group performance targets, including sustainability and climate-related targets. The Audit and Risk Committee (ARC), members

of Fortum Executive Management (FEM), and other senior executives support the Board of Directors in the decision making in these matters, when necessary.

The Senior Vice President, Corporate Affairs and Communications, has the overall responsibility for sustainability, which also includes climate-related issues in Fortum, excluding Uniper. He is a member of Fortum Executive Management (FEM), and, as a C-suite officer, he has the executive-level responsibility for Fortum's TCFD reporting. Uniper is not represented in FEM.

The Uniper SE Management Board bears the overall responsibility for the adoption and implementation of Uniper's sustainability measures, including climate-related measures. Uniper's highest governance board, the Supervisory Board, monitors the fulfilment of Uniper's sustainability obligations. In Uniper, the C-suite officer having the overall responsibility for sustainability and climate-related issues is the Chief Sustainability Officer (also the Chief Operating Officer), who is a member of the Uniper SE Management Board.

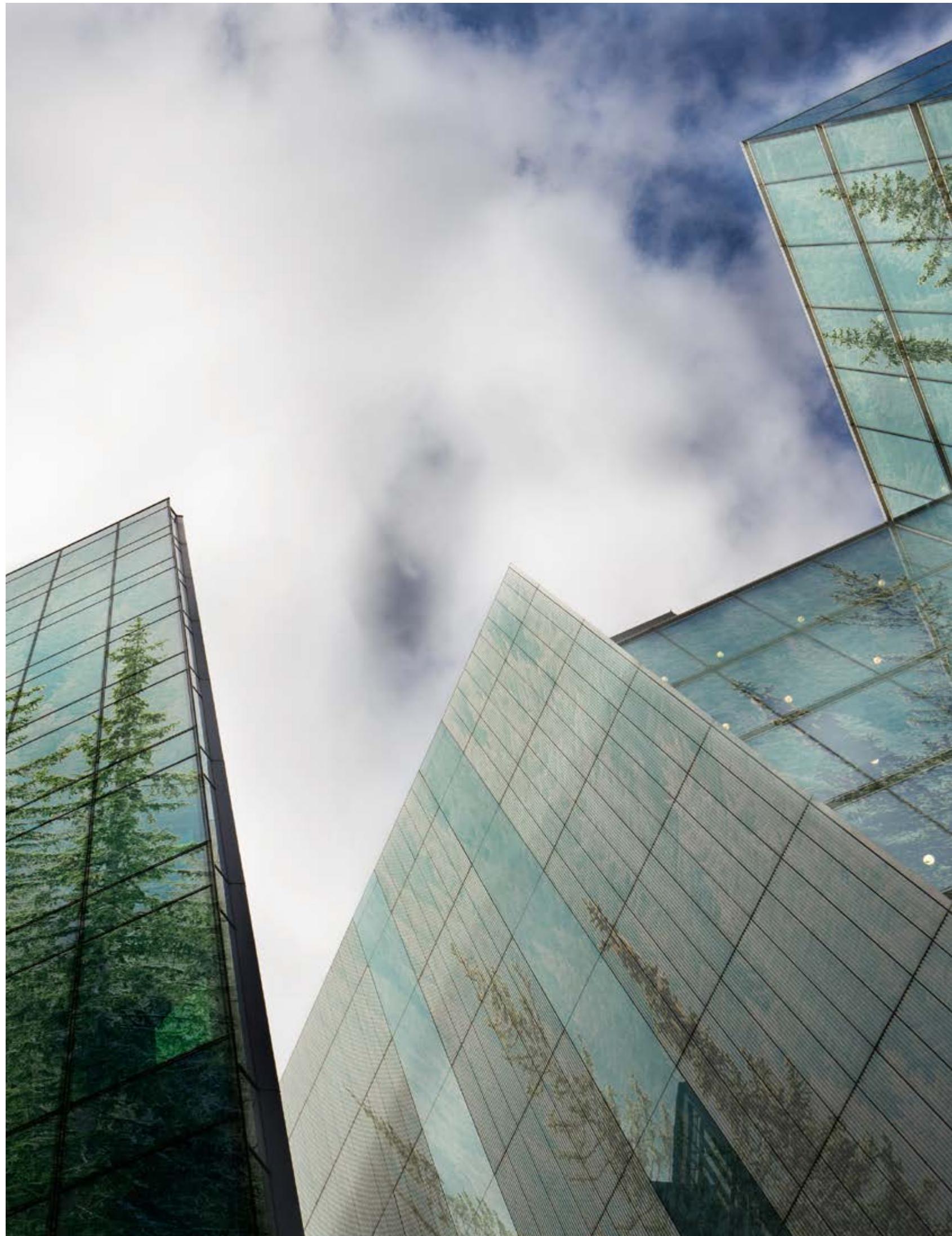
In Fortum, excluding Uniper, there is a specific review of the key climate-related risks by a group of experts from selected functions. These risks are reported to FEM and the ARC as part of the annual review of material risks and uncertainties for Fortum. Responsibility for providing a consolidated view of Fortum's production portfolio, its long-term development, and its alignment with the Group's strategy and climate-related targets falls under the strategy function. Concrete actions are executed by the line management according to the annual planning.

Fortum's climate-related risks are described in the ▶ **Financials 2020** report in the section Risk management.

Strategy

Climate change is one of the main drivers behind Fortum's strategy. Our strategy is designed so that Fortum will be successful in a decarbonised society.

The Paris Agreement aims at limiting the global warming to well below 2°C and pursuing efforts to limit it to 1.5°C by the end of



the century. A central part of the agreement is to strengthen the global response to climate change mitigation. Ambitious actions and investments are required to ensure the transition to the sustainable and low-carbon energy system needed to limit global warming.

Fortum believes that the transformation of the electricity sector is making good progress, and, e.g., the EU emissions trading system will increasingly steer investments towards CO₂-free production technologies. This will accelerate the low-carbon transition in society and create new business opportunities, but it alone will not be sufficient for the EU to meet the goals of the Paris Agreement. The European Council has agreed on the goal to achieve climate neutrality by 2050. This requires a reduction of greenhouse gas emissions in all sectors, not just in energy but also in heating and cooling, industry and transport, and, at the same time, carbon capture, utilisation and storage, and negative emissions must be increased.

Fortum has four strategic priorities to drive the energy transition and enable decarbonisation, affordability, and security of supply:

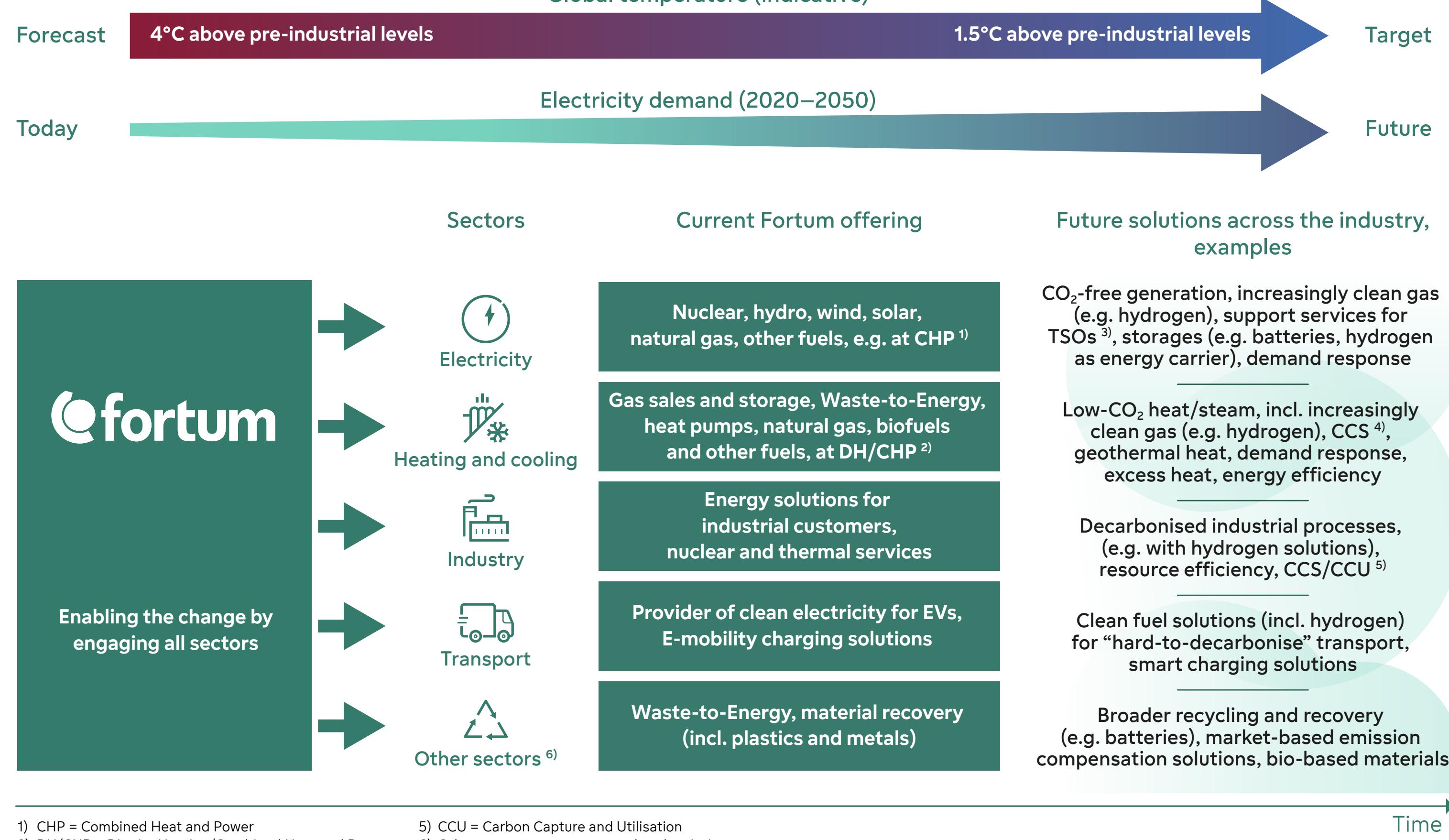
1. Transform own operations to carbon neutral
2. Strengthen and grow in CO₂-free power generation
3. Leverage strong position in gas to enable the energy transition
4. Partner with industrial and infrastructure customers

Transform own operations to carbon neutral

In our first strategic priority, we focus on our own operations and power plants, and reduce emissions from these sources. Fortum has committed to become carbon neutral (Scope 1, 2 and 3 emissions) at the latest by 2050, which is aligned with the goals of the Paris Agreement. Additionally, Fortum has committed to reduce CO₂ emissions (Scope 1 and 2) in the European generation by at least 50% by 2030 compared to base-year 2019, and to become carbon neutral (Scope 1 and 2) in the European generation at the latest by 2035.

Energy Climate Emissions Water Biodiversity Circular economy

Decarbonising society



1) CHP = Combined Heat and Power

2) DH/CHP = District Heating/Combined Heat and Power

3) TSO = Transmission System Operator

4) CCS = Carbon Capture and Storage

5) CCU = Carbon Capture and Utilisation

6) Other sectors = non-energy related emissions: industrial processes and product use, waste management, agriculture, fugitive emissions

By 2030, Fortum will phase-out or exit about 8 GW of coal-fired power generation. For natural gas-fired power generation, alternatives to decarbonise and transit to clean gas (e.g. hydrogen) are assessed and pursued continuously, though not all technical solutions are known yet. In Russia, we aim to transform our business portfolio over time by reducing fossil exposure and investing in renewables.

Strengthen and grow in CO₂-free power generation

Fortum is currently the third largest CO₂-free power generator in Europe. We will optimise and maintain benchmark operations in hydro and nuclear power and grow a sizable portfolio of onshore wind and solar. Our target is to build 1.5–2 GW of new renewable energy capacity by 2025, primarily in Europe. Depending on market conditions, the renewable energy growth will be done either via the “build-operate-transfer” model or on our own balance sheet.

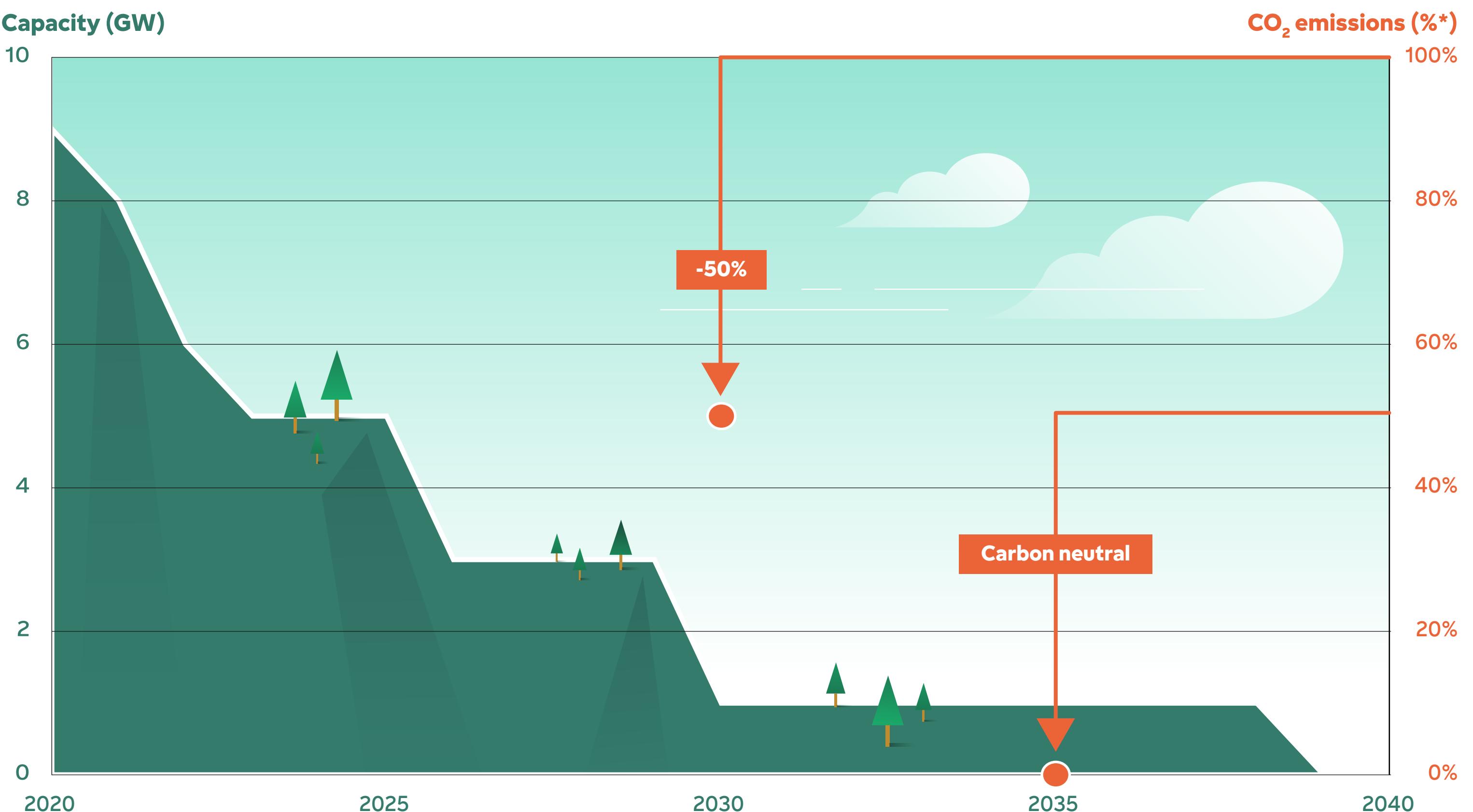
Leverage strong position in gas to enable the energy transition

Fortum is a significant provider of flexible gas-fired generation and a major provider and trader of gas for European energy and industrial customers. We will decarbonise gas-fired power generation and transition to clean gases (e.g. hydrogen) over time, and we are actively assessing and pursuing opportunities for this. Examples of potential solutions include hydrogen conversion and carbon capture, utilisation and storage, though not all technical solutions are known yet or commercially available.

Partner with industrial and infrastructure customers

Fortum will utilise its competences to also help customers reduce their carbon footprint and environmental impacts. Examples of services include grid stability services to TSOs (Transmission System Operators), waste-to-energy and recycling solutions, and low-carbon industrial solutions. We will also build on our first-mover position in hydrogen to support industries to decarbonise their processes.

Fortum's coal-fired power generation capacity and CO₂ emission reduction targets in Europe



* Scope 1 and 2 emissions, compared to 2019 as base year

Prevailing climate-related risks in different temperature scenarios

Fortum's scenario	Prevailing transition risks in the scenario	Prevailing physical risks in the scenario
+4°C	<p>Policy and legal risks</p> <ul style="list-style-type: none"> Lack of ambitious climate targets for the globally largest emitters of greenhouse gases National and uncoordinated climate policies and regulation frameworks in the EU leading to, e.g., EU ETS losing its relevance High number of climate-related litigation or lawsuits against states and companies <p>Technology risks</p> <ul style="list-style-type: none"> Green hydrogen solutions not competitive enough for decarbonisation Lack of large-scale storage solutions <p>Market risks [impacts on supply and demand]</p> <ul style="list-style-type: none"> Increased electricity and gas price volatility due to changing weather patterns Lower market prices of electricity due to a low or lack of price of CO₂ emissions and low electricity demand Fossil-fuelled power generation share remains on relatively high level and stagnating renewable investments Low or stagnating electricity demand growth due to less electrification Low investments in infrastructure endangering security of supply <p>Reputation risks</p> <ul style="list-style-type: none"> NGOs' activities increasingly targeting large emitters of greenhouse gases 	<p>Acute risks</p> <ul style="list-style-type: none"> High frequency of extreme heat waves and dry spells leading to, e.g., forest fires High frequency of intense storms with heavy wind, rain, and flash floods <p>Chronic risks [change in long-term weather patterns]</p> <ul style="list-style-type: none"> Increase in average temperatures (incl. water) higher in the Nordics than the global average Increased average precipitation in the Nordics and changes in seasonality Less or later precipitation as snow and earlier springflood Changed wind patterns
+3°C	<p>Policy and legal risks</p> <ul style="list-style-type: none"> Limited progress in climate ambition and policies of non-EU countries Ambitious EU climate policy and regulation frameworks maintained, but complemented with national and uncoordinated policies Discrepancy between infrastructure investments and climate ambitions Increasing number of climate-related litigation or lawsuits against states and companies Increasing acceptability issues regarding various technologies Technology-biased sustainability requirements impacting costs and availability of financing Biodiversity regulations limiting the use of hydropower and new investments, e.g., in wind <p>Technology risks</p> <ul style="list-style-type: none"> Accelerated decline in renewable costs, while a price of CO₂ emissions stays moderate Electricity price decreases due to increase in continental solar power Large-scale green hydrogen solutions not competitive enough for decarbonisation Lack of large-scale storage solutions <p>Market risks</p> <ul style="list-style-type: none"> Low success in sector coupling and electrification <p>Reputation risks</p> <ul style="list-style-type: none"> NGOs' activities increasingly targeting large emitters of greenhouse gases 	<p>Acute risks</p> <ul style="list-style-type: none"> Increasing frequency of extreme heat waves and dry spells Increasing frequency of intense storms with heavy wind, rain, and flash floods <p>Chronic risks</p> <ul style="list-style-type: none"> Increase in average temperatures (incl. water) higher in the Nordics than the global average Increased average precipitation in the Nordics and changes in seasonality (i.e. long wet and dry spells) Less or later precipitation as snow and earlier springflood Changed wind patterns
+1.5–+2°C	<p>Policy and legal risks</p> <ul style="list-style-type: none"> Implementation of ambitious global climate targets through non-market based and heavily regulated policies with high compliance costs, e.g., in Russia Highly ambitious EU climate and energy targets introduce inefficient, overlapping policies and non-market-based mechanisms Sustainability requirements impacting cost and availability of financing Banning or tighter restrictions on incineration and on various fuel use <p>Technology risks</p> <ul style="list-style-type: none"> Disruptive technologies create cheap sources of flexibility Increased speed of technological developments for carbon capture, storage, utilisation, and direct air capture Accelerated decline in costs of renewable energy sources <p>Market risks</p> <ul style="list-style-type: none"> Oversupply of renewable production due to non-market based subsidies <p>Reputation risks</p> <ul style="list-style-type: none"> Stricter sustainability requirements from stakeholders, e.g., in investor criteria 	<p>Acute risks</p> <ul style="list-style-type: none"> Extreme heat waves and dry spells Intense storms with heavy wind, rain, and flash floods <p>Chronic risks</p> <ul style="list-style-type: none"> Increase in average temperatures (incl. water) Increased average precipitation in the Nordics and changes in seasonality (i.e. long wet and dry spells) Less or later precipitation as snow and earlier springflood Changed wind patterns



Scenario analysis

Fortum, excluding Uniper, operates with five different scenarios, each describing a different degree of ambition in climate change mitigation, technological development, and evolution in the political landscape. We apply a scenario framework, where internal industry expertise is combined with assumptions derived from external benchmarks, such as IEA, Bloomberg NEF, and IHS Markit. Uniper operates its own scenario analyses independently of Fortum.

During the strategy alignment work in 2020, also Fortum's and Uniper's scenario analyses were reviewed at qualitative level. However, as of now, no alignment of the scenario analyses has been completed.

Two of Fortum's most optimistic scenarios in terms of climate are consistent with the 1.5 and 2 degrees pathways. These scenarios are dominated by transition risks, whereas in higher-temperature scenarios also physical risks, both acute and chronic, are increasingly present.

The pricing of greenhouse gas emissions is at the centre of Fortum's scenarios. In Europe, the EU emissions trading system (EU ETS) is expected to remain the key mechanism in reducing CO₂ emissions. Globally, we see a clear need for an increased ambition in both reducing emissions and improving resource efficiency, in order to be in line with the goals of the Paris Agreement.

Climate-related risks

The management of climate-related risks is integrated into Fortum's and Uniper's respective risk management frameworks and follows the same governance and processes as other material risks and uncertainties. Risks are regularly identified and assessed through a structured process. Risk owners are assigned for managing the risks and they are regularly reported and followed-up in various management teams and expert forums.

Climate-related risks are divided into two categories: transition risks and physical risks. The identified physical risks are generally found in the operational risk category, whereas transition risks are generally part of the strategic risk category.

Energy Climate Emissions Water Biodiversity Circular economy

Fortum's climate-related risks are also described in the [► Financials 2020](#) report in the section Risk management. As Uniper currently does not apply the same approach to climate-related risks, the transition risks and physical risks described below have been assessed for Fortum, excluding Uniper.

Key climate-related transition risks

Risk description	Impact assessment	Key mitigating actions
Policy and legal risks <ul style="list-style-type: none"> Insufficient rate of decarbonisation, resulting in achievement gaps in ambitious and revised EU targets Overlapping or inefficient policy mechanisms, such as diluting the EU ETS Political decisions without offering sufficient compensation for write-offs, impairments, or early retirement of existing assets Banning or tighter restrictions on incineration of various fuels, e.g., waste EU methane strategy, incl. emissions from natural gas transport and storages 	Hundreds of MEUR ¹⁾	<p>Fortum's updated strategy, incl. investments in renewables and hydrogen, is the priority to change climate-related risks to opportunities.</p> <p>Lobbying for:</p> <ul style="list-style-type: none"> Coherence of targets and policies within the EU Increased electricity demand through electrification Increased demand flexibility to balance variable supply Stronger and more interconnected grids to keep up with increase in variable RES Carbon pricing as the main instrument in decarbonisation and clear EU criteria for market-based capacity remuneration Energy recovery of waste as part of the circular economy
Technology risks <ul style="list-style-type: none"> Disruptive technologies creating, e.g., cheap sources of electricity storage, and decreased costs of renewable production forms Economical and technological challenges impacting growth in green hydrogen 	Hundreds of MEUR ¹⁾	<ul style="list-style-type: none"> Preparation for the decommissioning of unprofitable conventional assets Monitoring technology development to ensure correct timing of investments and divestments Early insight through venturing and selectively investing in technology innovations
Market risks <ul style="list-style-type: none"> Lower or more volatile electricity and gas prices due to change in weather patterns 	Hundreds of MEUR ¹⁾	<ul style="list-style-type: none"> Preparation for the decommissioning of unprofitable conventional assets Modelling of climate change scenarios Project participation in long-term storage solutions
Reputation risks <ul style="list-style-type: none"> Stricter demands from stakeholders, incl. rules of sustainable finance, lower carbon thresholds for investors, increased activities by NGOs, due to fossil-fuelled power generation 	Reputation and brand impact	<ul style="list-style-type: none"> Constant evaluation of asset base Clear communication of our strategy and actions Wider market approach Lobbying for definitions of sustainable finance Diversification of bond portfolios Continuous dialogue with NGOs

1) Uniper has not been included in Fortum's impact assessment.

Key climate-related physical risks

Risk description	Impact assessment	Key mitigating actions
Acute risks <p>Extreme weather conditions leading to local damages and production losses, e.g.:</p> <ul style="list-style-type: none"> Intense storms with heavy rains and flooding Flash floods, increasing the risk of dam breaches Extreme heat and dry spells causing forest fires 	Tens of MEUR ¹⁾	<ul style="list-style-type: none"> Increased preparedness for local flooding, storms, and forest fires Investments in long-term dam safety, incl. climate change risk assessments
Chronic risks <ul style="list-style-type: none"> Changes in long-term weather patterns (e.g. precipitation and inflow, incl. longer wet or dry periods, increased average temperatures, warmer water sources, and more or less wind), impacting electricity demand and supply, e.g., via hydropower production, and the availability of cooling water 	Tens of MEUR ¹⁾	<ul style="list-style-type: none"> Investments in power production flexibility Preparations for changes in the sourcing of cooling and process water Ensuring climate change scenarios are included in investment decisions in new businesses

1) Uniper has not been included in Fortum's impact assessment.

Climate-related opportunities

Fortum believes that the growing awareness and concern about climate change will increase the market demand for low-carbon and resource- and energy-efficient products and services. We also believe that the electrification of transportation, industry, and services will increase the consumption of low-carbon electricity in particular. Business opportunities creating climate benefits are further supported by our business area-specific targets. The transformation underway leads to structural changes in various industrial sectors, opening up new opportunities and addressable markets.

As the market transforms towards climate neutrality, and Europe decarbonises its energy system, coal-fired power generation will be largely replaced by renewable energy sources, i.e. wind and solar power. This will also increase the demand and value of flexible hydropower as well as base-load production, such as nuclear power. As the third largest CO₂-free power generator in Europe, Fortum is well positioned to capture these opportunities. Fortum also targets to build 1.5–2 GW of new renewable power generation by 2025.

The role of gas-fired power plants as a source of flexibility will grow during the transition. In the longer-term natural gas-fired power generation will be replaced by the use of increasingly clean gases, e.g., hydrogen. Uniper has currently cooperation with several plant suppliers to evaluate the feasibility to the use of hydrogen at Uniper's gas-fired power plants. Fortum and Uniper aim to have one joint team focusing on the opportunities of hydrogen. The production of green hydrogen through electrolysis will require a supply of CO₂-free power, good grid connections, a skilled workforce, and water availability. Fortum is looking forward the possibilities to utilise its know-how of hydrogen and existing infrastructure at the power plants for hydrogen production, as the coal-fired power generation will be decommissioned.

In 2020, Fortum commissioned the 99-MW Sørfjord wind power farm in Norway and constructed the 90-MW Kalax wind power farm in Finland. We have 116 MW of solar power under construction in Russia and 250 MW of solar power in India. Additionally, the Fortum-Rusnano investment fund with 50/50 ownership has won the right to build a total

of 1,823 MW of new wind capacity, of which 600 MW is operational, 495 MW is under construction, and 728 MW is under development. The refurbishments of Fortum's own hydropower plants in Sweden and Finland produced 10 MW of new renewable electricity production capacity, excluding Uniper.

In Finland, the Espoo Clean Heat project is transforming the City of Espoo's district heating to carbon neutral by 2029. The new generation of district heating will be based on replacing fossil fuels with smart and flexible solutions such as excess heat utilisation, renewable electricity, geothermal energy, and bioenergy. Artificial intelligence will optimise the operations of the whole district heating system. In summer 2020, one coal-fired unit at the Suomenoja power plant in Espoo was replaced with a new Kivenlahti bio-heating plant, and key contracts were also signed for the utilisation of excess heat.

Fortum Oslo Varme's CCS (Carbon Capture and Storage) project is a full-scale pilot to test CO₂ capture at the Klemetsrud Waste-to-Energy plant in Norway. The project consists of a full CCS value chain, from capture to transport and storage of CO₂, and includes several industrial actors.

In Russia, the majority of our energy production is based on natural gas. Fortum has completed major investment programmes over the past decade and have transformed inefficient power units to more efficient power units that mainly use Combined-Cycle Gas Turbine (CCGT) technology, which represents the best available technology in natural gas combustion (efficiency 80–85%).

Fortum will phase-out or exit its coal-fired power generation in Germany, with the exception of the coal-fired Datteln 4 power plant, by 2025, in the United Kingdom by 2025, and in the Netherlands by 2029.

In Germany, the 875-MW Heyden 4 coal-fired power plant was taken out of commercial power generation at the end of 2020, and the power plant will be closed permanently at the beginning of July 2021, provided that the German Federal Network Agency does not deem it critical to system stability. The Wilhelmshaven, the Scholven, and the Staudinger coal-fired power plants will be closed by the end of 2025 at the latest. These power plants have a combined electricity output

of about 2,000 MW. The construction project of two new CCGTs is ongoing to replace the existing coal-fired Scholven plant in Germany.

Uniper has signed collaborative agreements with both General Electric and Siemens to explore, how alternative fuels, e.g., hydrogen, and carbon capture could make gas turbines and compressors of its gas storage sites carbon-neutral. In late 2020, Fortum also partners in a project for producing sustainable methanol from green hydrogen to support the chemicals company Perstorp to significantly reduce their carbon emissions in Sweden.

In 2020, Fortum invested EUR 372 million in CO₂-free production. Projects and investments under construction and decisions on new investments are described in more detail in the section ▶ [Energy](#).

Fortum's research and development (R&D) activities also aim at building a platform for future growth in, e.g., wind and solar power, various fuels demand response, and material recovery of batteries. In 2020, Fortum spent EUR 56 million on research and development.

Fortum has announced an indicative growth capex of EUR 3 billion for 2021–2025. The actual amount will depend on market conditions, asset rotation, and balance sheet strength. The growth capex will be used to finance investment in four focus areas:

- Renewables (50–55%)
- Hydrogen and clean gas (about 15%)
- Environmental and security of supply solutions
- Other (e.g., venturing, innovation, digitalisation)

We also offer our customers a range of energy services and energy products to help them improve their energy efficiency and reduce their carbon footprint, among others:

- CO₂-free electricity products and carbon-neutral heat products
- Real-time monitoring and optimisation of energy consumption
- Electric vehicle (EV) infrastructure solutions

Additionally, we are expanding our offering by investing in start-ups that are developing new technologies.

Climate engagement lobbying

Fortum's climate advocacy is strongly based on climate science, and support for the Paris Agreement is the core principle underpinning Fortum's climate advocacy. Fortum has expressed its support to the EU 2050 climate neutrality goal, and we continue to lobby for legislation and policy instruments that will facilitate a cost-efficient transition towards a climate neutral Europe by 2050. Fortum also supports the revision of the EU 2030 climate target to at least 55%.

Since the early 2000s, Fortum has been a firm supporter of ambitious EU climate policy with the EU emissions trading system (ETS) as the main instrument to implement and drive the climate policy objectives in sectors covered by the tool, i.e. energy and industries. We believe that market-based, technology-neutral and flexible carbon pricing is the most efficient and cost-effective way to drive decarbonisation in Europe.

In parallel with lobbying for tighter targets and a more extensive EU ETS system, Fortum has advocated for the establishment of a global carbon pricing and carbon market in the context of various EU level and international initiatives. Fortum, excluding Uniper, is participating in a number of international initiatives promoting the role of business in climate change mitigation. These include, for example, the UN Global Compact's Caring for Climate initiative and the World Bank's Carbon Pricing Leadership Coalition.

In line with Fortum's updated strategy, climate lobbying is in the core of Fortum's public affairs. Fortum pursues transparent, solution-driven, constructive, pro-active, forward-looking and fact-based lobbying based on robust governance procedures. Corporate Affairs and Communications has responsibility for political engagement.

Fortum actively contributes to various public consultations at the EU level and at the national level, and we publish all our position papers on our website. We also share our views and knowledge through other means of communication, such as through Fortum's Corporate blog. Fortum's core climate message has systematically been consistent: the EU climate policy ambition should be increased, the steering effect

of the EU ETS should be strengthened, and more sectors should be brought into the scope of the EU ETS.

In addition to its own direct lobbying, Fortum is involved in several industry associations and company coalitions doing joint climate engagement lobbying. We publish information about our memberships in key industry associations on our website. The key industry associations include, among others, Eurelectric, Euroheat and Power, IETA, Finnish Energy, and Swedenergy. These organisations work on a consensus principle, and, therefore, their positions sometimes remain at a more general level than the individual company positions. The alignment of industry associations with our positions varies case by case, recognising that associations differ in terms of the profile of their members and the scope of their activities.

Recognising the importance of climate lobbying to the achievement of Fortum's ambitious climate targets, we have decided to undertake a review of our lobbying activities and practices, including transparency, and clarify the governance of Fortum's climate lobbying during 2021. In addition, Fortum will conduct a review of how well the lobbying activities of key energy industry associations are aligned with the Paris Agreement. The review will cover industry associations where Fortum is a member in Europe, Russia, and India. The review will be published as a part of Fortum's Sustainability report in 2022, and thereafter on a yearly basis.

Fortum, excluding Uniper, never uses third parties to lobby for it. We strive for continuous development of our lobbying skills and practices with the aim to become a benchmark in lobbying among energy industries. Fortum does not make payments to political parties, organisations or their representatives. Fortum is registered in the EU Transparency Register (ID: 03501997362-71). Respectively, Uniper's number in the Register is 285977820662-03. Fortum does not make payments to political parties, organisations, or their representatives.



Metrics and targets

Transforming our own operations to carbon neutral is a strategic priority for us. To accelerate the development, we have committed to the following ambitious climate targets:

- CO₂ emissions reduction (Scope 1 and 2) in European generation by at least 50% by 2030 (compared to base-year 2019)
- Carbon neutral (Scope 1 and 2) in European generation by 2035 at the latest
- Carbon neutral globally (Scope 1, 2, and 3 GHG emissions), in line with the goals of the Paris Agreement, by 2050 at the latest.

During 2021, we will develop a target for the reduction of Scope 3 GHG emissions, addressing especially the indirect emissions from our natural gas and coal sales to end-users.

Fortum's long-term incentive (LTI) programme includes a climate-related metric. In the 2020–2022 LTI plan, the target is related to the reduction of Fortum's CO₂ emissions aligned with Fortum's strategy. In the 2021–2023 LTI plan, the target is linked to the reduction of Fortum's coal-fired power generation capacity in line with

Fortum's coal-exit path, with a minimum level requiring exceeding the communicated ambition level. The LTI target is not applicable to Uniper's employees. Uniper continues to follow its own LTI plans.

Fortum's specific carbon dioxide emissions (Scope 1) from total energy production in 2020 were 287 gCO₂/kWh. Our carbon dioxide emissions from energy production in Europe were 188 gCO₂/kWh. These figures include Uniper from the second quarter 2020 onward.

The boundary for specific carbon dioxide emissions generated from energy production differs from other environmental [reporting principles](#). The figures include also figures from Fortum's share in associated companies and joint ventures that sell their production to the owners at cost. This electricity production is based on hydro, wind,

and nuclear power, and the production doesn't cause direct carbon dioxide emissions.

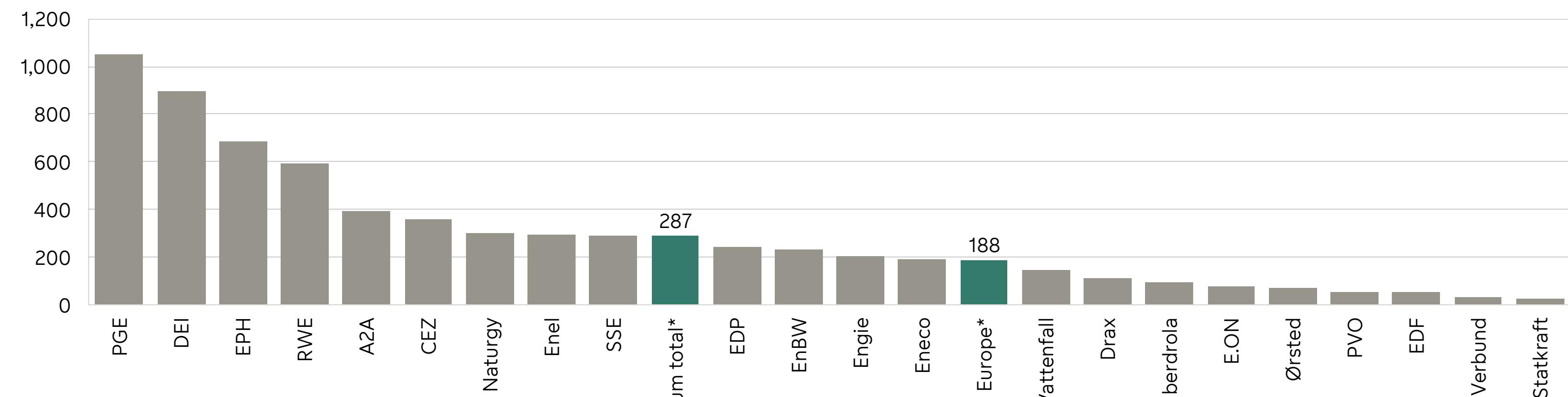
In calculating the specific carbon dioxide emissions, CHP plant emissions have been allocated for electricity and heat using the efficiency method presented in the Greenhouse Gas (GHG) Protocol guidelines, with heat production efficiency of 90% and electricity production efficiency of 40%.

Our energy-efficiency improvements are described in more detail in the section [Energy efficiency](#). Our power and heat production is described in the section [Energy](#), and our water withdrawal at power plants located in high and extremely high water-stressed areas is described in the section [Water](#).

287 gCO₂/kWh

Specific CO₂ emissions from total energy production

Specific CO₂ emissions of major utilities in Europe, gCO₂/kWh electricity, 2019



* "Fortum total" and "Fortum Europe" include specific carbon dioxide emissions from power and heat production in 2020. The figures include Uniper from the second-quarter of 2020. All other figures, except "Fortum total" and "Fortum Europe", include European power generation in 2019. For some companies the PwC figures might also include heat production.
Source: PwC, December 2020, Climate change and Electricity, Fortum

Greenhouse gas emissions

Fortum's greenhouse gas emissions are defined and reported according to the Greenhouse Gas (GHG) Protocol guidelines. Our greenhouse gas emissions in 2020 totalled 77.7 million tonnes. Scope 1 emissions were 49.0 million tonnes, Scope 2 emissions 0.8 million tonnes, and Scope 3 emissions 27.8 million tonnes.

The figures for the comparison years for greenhouse gas emissions have not been adjusted or restated, due to insufficient data.

Direct greenhouse gas emissions (Scope 1) in 2018–2020 (GRI 305-1)¹⁾

Mt CO ₂ -eq	2020	2019	2018
CO ₂	48.8	19.1	20.1
CH ₄	0.08	0.01	0.01
N ₂ O	0.2	0.1	0.09
HFCs	0.00	0.00	0.00
SF ₆	0.00	0.00	0.00
Total	49.0	19.3	20.2

¹⁾ Uniper consolidated as of Q2/2020

Direct carbon dioxide emissions by country in 2018–2020 (GRI 305-1)¹⁾

Mt	2020	2019	2018
Russia	30.5	16.3	16.9
Germany	9.0	-	-
United Kingdom	3.3	-	-
Netherlands	3.1	-	-
Finland	0.8	1.3	1.7
Poland	0.7	0.8	0.8
Hungary	0.6	-	-
Other countries	0.8	0.8	0.8
Total	48.8	19.1	20.1

¹⁾ Uniper consolidated as of Q2/2020

Direct greenhouse gas emissions – Scope 1

Fortum's Scope 1 greenhouse gas emissions accounted for about 63% of total greenhouse gas emissions. In 2020, our Scope 1 direct greenhouse gas emissions were 49.0 million CO₂-eq tonnes. The share of carbon dioxide emissions from our direct greenhouse gas emissions was 99%.

The majority of Fortum's direct CO₂ emissions, 48.7 million tonnes, are generated from the use of fossil fuels in energy production. Additionally, quite a small amount of direct CO₂ emissions, 0.1 million tonnes, is generated from the use of company vehicles. Of our direct carbon dioxide emissions, 63% originated from the Russian operations, 18% from Germany, 7% from the United Kingdom, 6% from the Netherlands, and 2% from Finland.

In 2020, of the direct carbon dioxide emissions, 17.5 million tonnes were within the EU emissions trading system (ETS). About 96% of CO₂ emissions from our energy production in Europe were within the sphere of the EU ETS. Fortum was granted free emission allowances corresponding to 0.9 million tonnes. In terms of emission allowances, we had a deficit and purchased the shortfall of emission allowances from the markets.

In 2020, Fortum's direct biogenic carbon dioxide emissions were about 2.3 million tonnes.

The calculation of greenhouse gas emissions covers carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated hydrocarbons (HFCs), and sulphur hexafluoride (SF₆). Carbon dioxide emissions as well as methane and nitrous oxide emissions have been calculated on the basis of plant-specific fuel data. The amounts of HFC compounds and SF₆ are mainly reported on the basis of the amounts of gas added to the equipment. Specific emission factors of gases are based on IPCC publications (IPCC Fifth Assessment Report, 2014 (AR5), 100-year time horizon).

Indirect greenhouse gas emissions – Scope 2

Fortum's Scope 2 greenhouse gas emissions accounted for 1% of total greenhouse gas emissions. Our market-based Scope 2 greenhouse gas emissions from the production of electricity purchased for our own use were 0.8 million CO₂-eq tonnes.

Market-based indirect greenhouse gas emissions (Scope 2) in 2018–2020 (GRI 305-2)¹⁾

t CO ₂ -eq	2020	2019	2018
CO ₂	808,600*	77,800	91,800
CH ₄	2,300**	4,900	100
N ₂ O	700**	1,500	290
Total	811,700	84,200	92,200

¹⁾ Uniper consolidated as of Q2/2020

* The figure also includes Uniper's CH₄ and N₂O emissions as CO₂-eq.

** The figure includes Fortum only.

Location-based indirect greenhouse gas emissions (Scope 2) in 2018–2020 (GRI 305-2)¹⁾

t CO ₂ -eq	2020	2019	2018
CO ₂	623,900*	122,800	98,100
CH ₄	5,400**	8,000	200
N ₂ O	2,700**	3,300	600
Total	632,000	134,100	98,900

¹⁾ Uniper consolidated as of Q2/2020

* The figure also includes Uniper's CH₄ and N₂O emissions as CO₂-eq.

** The figure includes Fortum only.

Scope 2 greenhouse gas emissions in Russia have been estimated based on a country-specific breakdown of electricity production and specific emission factors for both market-based and location-based approach.

Other indirect greenhouse gas emissions – Scope 3

Fortum's Scope 3 greenhouse gas emissions accounted for about 36% of our total greenhouse gas emissions. In 2020, our Scope 3 greenhouse gas emissions in 2020 were estimated to be 27.8 million tonnes. Our Scope 3 emissions originate mainly from fossil energy sources. Fortum and Uniper apply different approaches and specific emission factors in estimated GHG emission calculations.

The majority of our Scope 3 greenhouse gas emissions are caused by the procurement of fuels and electricity retail, the use of sold products, upstream transportation and distribution, the purchased goods and services, and capital goods, i.e. investments. Emissions of the Residual mix electricity retail are for the first time included in 2020.

The production and transportation of fuels and electricity retail accounted for 55%, and the use of sold products, i.e. sales of natural gas and coal, accounted for 37% of Scope 3 greenhouse gas emissions.

Indirect greenhouse gas emissions (Scope 3) in 2018–2020 (GRI 305-3)¹⁾

t CO ₂ -eq	2020	2019	2018
Fuel procurement and electricity retail (category 3)	15,408,900*	5,195,700	5,489,600
Use of sold products (category 11)	10,422,900	-	-
Upstream transportation and distribution (category 4)	767,300	-	-
Purchased goods and services (category 1)	688,300	319,900	260,900
Capital goods (category 2)	381,100	273,300	310,700
Upstream leased assets (category 8)	153,100	-	-
Other activities (categories 5–7, 10)	14,700**	20,400	19,700
Total	27,836,400	5,809,300	6,080,900

¹⁾ Uniper consolidated as of Q2/2020

* Electricity retail included

** For now, Uniper has not included Scope 3 categories 5 and 10 in its GHG emissions.

Fortum, excluding Uniper, reports Scope 3 greenhouse gas emissions in accordance with the requirements of the Corporate Value Chain Accounting and Reporting standard. The volumes describing the scope of the various activities have been obtained from our monitoring and reporting systems.

The specific emission factors used in calculating the greenhouse gas emissions are based on different literature sources.

Compensation of emissions from air travel

Fortum has used the Certified Emission Reduction (CER) units received from the World Bank's Prototype Carbon Fund (PCF) to compensate for GHG emissions generated by employee air travel. In 2020, Fortum received a total of 25,326 CER units from this fund, and it has received a total of 2,881,000 CER units during the PCF's operating period. Fortum's GHG emissions from employee air travel have been compensated for since 2007, excluding Uniper. In 2020, Fortum's, excluding Uniper, GHG emissions of employee air travel were 1,500 CO₂-eq tonnes and decreased by about 75% from 2019 due to the Covid-19 pandemic.

► Fortum's CDP Climate Change 2020 response

Emissions

Energy production and other production operations generate emissions to the environment, such as to air and water. We aim to control emissions caused by our operations and to reduce their environmental impacts by using technological solutions and cleaning technology.

Emissions to air

Greenhouse gases that accelerate global climate change are generated primarily from the use of fossil fuels and the combustion of fossil-based waste. Flue-gas emissions causing local environmental and health effects are generated from all combustion.

We aim to reduce impacts on air quality

Nitrogen oxides (NO_x) are generated from the nitrogen contained in the fuel and in the combustion air. Sulphur dioxide (SO_2) is generated from the sulphur that is an impurity in, for example, coal, peat and oil. Particle emissions are fine-grained ash generated primarily in the combustion of solid fuels and waste. Depending on the origin of the fuel and waste, the particles contain various heavy metals.

It is possible to decrease nitrogen oxide, sulphur dioxide and particle emissions through fuel choices, combustion technology, and various flue-gas cleaning technologies. Fortum has world-class know-how in combustion technology. We aim to reduce emissions to air from our own operations, and we also offer solutions to reduce our customers' flue-gas emissions. Fortum has delivered combustion technology solutions to reduce nitrogen oxide emissions to many customers' power plants. In 2020, we had ongoing projects to reduce the nitrogen oxide (NO_x) emissions of customers' fossil fuel-fired boilers in Finland, Poland, Czech Republic and Ireland, as well as a bio-oil-fired boiler in Sweden. Additionally, Fortum implemented the first project to reduce NO_x emissions at a customer's coal-fired power plant in India.

The demolition of the coal-fired Inkoo condensing power plant in 2017–2020, and the transition of the coal-fired Meri-Pori power plant for 440 MW of production capacity to peak-load reserve capacity in

2020 have reduced our flue-gas emissions in Finland. We have also reduced flue-gas emissions in Poland with the commissioning of the new multi-fuelled Zabrze CHP plant, which has implemented Best Available Techniques (BAT), and, correspondingly, the decommissioning of the old coal-fired Zabrze and Bytom CHP plants.

Fortum's waste incineration plants located in Riihimäki, Finland; Kumla, Sweden; Nyborg, Denmark, and Oslo, Norway are equipped with efficient flue-gas cleaning systems. Harmful emissions to air are minimised with various filters and scrubbers selected on the basis of the waste to be incinerated.

Our carbon dioxide emissions are reported in the section ▶ [Climate](#).

Flue-gas emission requirements

The EU has set very strict limits for flue-gas emissions; meeting the requirements necessitates the use of Best Available Techniques (BAT). Emissions limits became stricter when the Industrial Emissions Directive came into force in 2016. The BAT Reference (BREF) document sets stricter emission standards that European power plants must meet by 2021 unless they obtain a formal derogation.

All Fortum's power plants operate in compliance with the terms of their environmental permits, and, for the most part, the plants also meet the new emissions requirements in Europe. In Germany, e.g., the new Datteln 4 power plant is equipped with an advanced multi-step flue-gas cleaning system for controlling and reducing nitrogen oxide, sulphur dioxide and particle emissions.

In 2020, we continued the optimisation of combustion at the Suomenoja power plant in Finland to reduce nitrogen oxides emissions and to boost the operational efficiency of the desulphurisation plant. In 2020, we also invested in systems reducing NO_x and SO_x emissions at the Rejtana heat plant in Poland. Additionally, we will continue investments in a flue-gas cleaning system at the Czestochowa CHP plant, Poland; the intention is to complete them in 2021.

Emissions at Russian power plants are limited in accordance with Russian legislation. The wet flue-gas cleaning system for particle emissions at the Argayash CHP plant has helped to reduce the power

plant's particle emissions by about half during the past five years. At the Beregovskaya GRES plant, electrostatic precipitators are installed at all three units, enabling the efficient removal of particle emissions.

Our flue-gas emissions

Our nitrogen oxide (NO_x) emissions were 50,200 tonnes, our sulphur dioxide (SO_2) emissions 17,900 tonnes, and our particle emissions 9,600 tonnes. 76% of nitrogen oxide, 81% of sulphur dioxide, and 97% of particle emissions originated from Russian operations. The most significant source of particle emissions, 5,100 (2019: 6,300) tonnes, was the Argayash CHP power plant in Russia.

The reporting of at least nitrogen oxide, sulphur dioxide and particle emissions from our European power plants is based on continuous measurements. Other flue-gas emissions data is based on discontinuous measurements or are calculated using fuel consumption data and specific emission factors. Specific emission factors are based on measurements taken at regular intervals, on information from the equipment supplier, or on regulatory norms.

Flue-gas emissions in 2018–2020 (GRI 305-7)¹⁾

	2020	2019	2018
NO_x , t	50,200	24,900	26,100
SO_2 , t	17,900	14,900	16,800
Particles, t	9,600	11,700	9,600
Mercury, kg	248*	116	118

1) Uniper consolidated as of Q2/2020

* The figure is a calculated estimation.

Emissions to water

Wastewater generated at power plants and other production facilities is treated either at the plant's own wastewater treatment plant and discharged into a water system or it is piped to a municipal wastewater treatment plant for further processing. Even after treatment, plant wastewater may contain solids, nutrients, like nitrogen and phosphorus, and heavy metals.

Wastewater effluents can impact local water quality as well as the nutrient and oxygen balance of the water system. In 2020, about 1.0 (2019: 1.3) tonnes of oil were released into water systems through wastewater generated Fortum's operations, excluding Uniper.

At the Argayash CHP plant and the Chelyabinsk CHP-2 plant in Russia, the wet method is used to pump ash from power plants into ash ponds. Some of the water from the ponds is recycled back to the power plant and some is released into a water system after sedimentation.

As a part of investment programmes in Russia, Fortum has modernised the Chelyabinsk CHP-1 and CHP-3 plants. Among others, fuel oil storages and piping systems have been decommissioned at these plants, which eliminate the risk of fuel oil spills, e.g., to the water system.

In 2020, the Chelyabinsk CHP-2 and CHP-3 plants, and the Argayash CHP plant had temporary permit limits for wastewater discharges. Investment plans for these power plants have been made to improve the wastewater treatment and to ensure that wastewater discharges comply with the permit limits. The Chelyabinsk CHP-3 plant investment project is estimated to be completed in 2023, the Chelyabinsk CHP-2 plant project in late 2025, and the Argayash CHP plant project in 2026.

Environmental non-compliances

Fortum regularly monitors the major EHS incidents. These, in part, reflect the quality of environmental management.

The definitions of major EHS incidents vary between the two companies; therefore, Uniper's EHS incidents were not included in Fortum's reporting in 2020. Significant environmental incidents include major spills and leaks of over 100 litres into the environment, significant

environmental permit violations, and other environmental non-compliances that have a significant impact on the environment.

In 2020, there were 16 (2019: 11) major EHS incidents, excluding Uniper; nine (2019: 6) of these were significant environmental incidents, i.e. eight major spills and leaks into the environment (2019: 4), and one (2019: 2) environmental permit violation. Additionally, there were six (2019: 3) major fires and one (2019: 1) INES (International Nuclear Event Scale) level 1 incident. There were no other major EHS incidents, such as explosions (2019: 1).

Spills and leaks into the environment

In 2020, there were eight major spills and leaks into the environment, excluding Uniper. Major spills and leaks are defined as over 100 litres of harmful material, such as oil, hazardous chemicals, wastewater or flammable gas, into the ground, water or air. Three of the incidents occurred in recycling and waste operations in Finland, one in the heating network in Pärnu, Estonia, one at a hydropower plant in Sweden, one at the Inkoo oil storage and one at the Loviisa nuclear power plant in Finland, and one at the Tyumen CHP-2 plant in Russia.

All incidents have been investigated to determine the corrective actions. The major spills and leaks did not have significant environmental impacts, apart from the oil spill that occurred at the Inkoo oil storage in Finland. The clean-up measures at Inkoo have been completed.

Environmental permit violations

In 2020, one new police investigation was initiated. There was a breach of the minimum discharge limit from the dam at Fortum's hydropower plant in Sweden. The incident may have a possible impact on the aquatic habitat and local fishing.

► Business ethics and compliance

► Occupational and operational safety



Water

We use water mainly as cooling water in our condensing power plants. Water is also a prerequisite for Fortum's hydropower production. Our responsibility for water use is related not only to water volume and availability, but also to its quality and to the aquatic habitat. We are improving the efficiency of our own water use, and we also offer services to our customers for the treatment, analysis, purification, and utilisation of their waste and sludge waters, and other severely polluted waters.

We use water within the limits set by our plants' environmental and other permits. Permit regulations affect, e.g., the water intake volume, the quality of discharged water, as well as discharges and water levels at hydropower plants. Additionally, we carry out water-related local measures in order to take into consideration the needs of other water users as well. ▶ **Collaboration** with local communities, municipalities, authorities and research institutes is important in the implementation of these measures.

In addition to our own water use, we recognise that water use also has impacts in our supply chain, especially in fuel production.

Risks and opportunities related to water use

The majority of our water withdrawal is seawater for cooling at condensing power plants, which decreases our overall water risks. In most cases we don't consume water in our operations; it is discharged into the same water system from which it was withdrawn. Fortum has production operations using water in water-stressed areas in Germany, the UK, Russia, Poland, the UAE, and India, based on water-stress screening using the WRI Aqueduct Water Risk Atlas. In water-stressed areas, water use is, by definition, generally large compared to the water resources available. In these areas the risks may be related to, e.g., water availability, increased cost of water, or restrictions in power production.



Efficient water management in hydropower production allows us to produce electricity at the right time and manage the impacts on the environment and on stakeholders. Hydropower is a good regulating power that enables other renewable energy sources, like wind and solar power, to be added to the grid. In Sweden, a national plan for the reassessment of hydropower for modern environmental conditions, implementing the EU Water Framework directive and targets for renewable energy, has the ambition to keep production losses at a minimum and limited to 1.5 TWh. Fortum is a participant in the joint hydropower environmental fund (Vattenkraftens miljöfond AB), the purpose of which is to fund environmental measures linked to the national plan and to compensate for production losses.

Fortum is systematically reducing risks related to dam safety. A long-term programme is in place for improving the surveillance of the condition of dams and for securing the discharge capacity in extreme flood situations.

Climate change is likely to change weather patterns and hydrological conditions in the regions where we operate. Warmer climate and water scarcity are likely to affect the amount of cooling water available for some of our thermal power plants and lead to the need for new cooling or process water sources. We have already experienced some cooling water shortage at some of our power plants due to an increase in water temperature, especially in Central Europe. Climate change may reduce or increase the amount of water and change the timing of water availability for hydropower plants, depending on the location.

In our operations we are preparing for changes in water availability and hydrological conditions. The preparations are related to, for example, production planning, investments, dam safety, flood protection, and the rise in the cooling water temperature.

In hydropower production planning we are preparing for climate change by taking into consideration changes in precipitation and temperature and extreme weather phenomena, which can cause droughts or flooding. We are also monitoring the need for adjustments to regulation permits with changes in seasonal variation as a result of climate change.

Water withdrawal for cooling in 2018–2020 (GRI 303-3)¹⁾

million m ³ , i.e. 1,000 megalitres	2020	2019	2018
Seawater	3,747	1,440	1,508
Fresh surface water	1,214	535*	521*
Municipal water	5.4	0	0
Groundwater	0.1	0	0
Total water withdrawal for cooling	4,967	1,975*	2,029*

1) Uniper consolidated as of Q2/2020. The figures also include the separately reported cooling water withdrawal in water-stressed areas.

* Calculation principle changed due to alignment with Uniper.

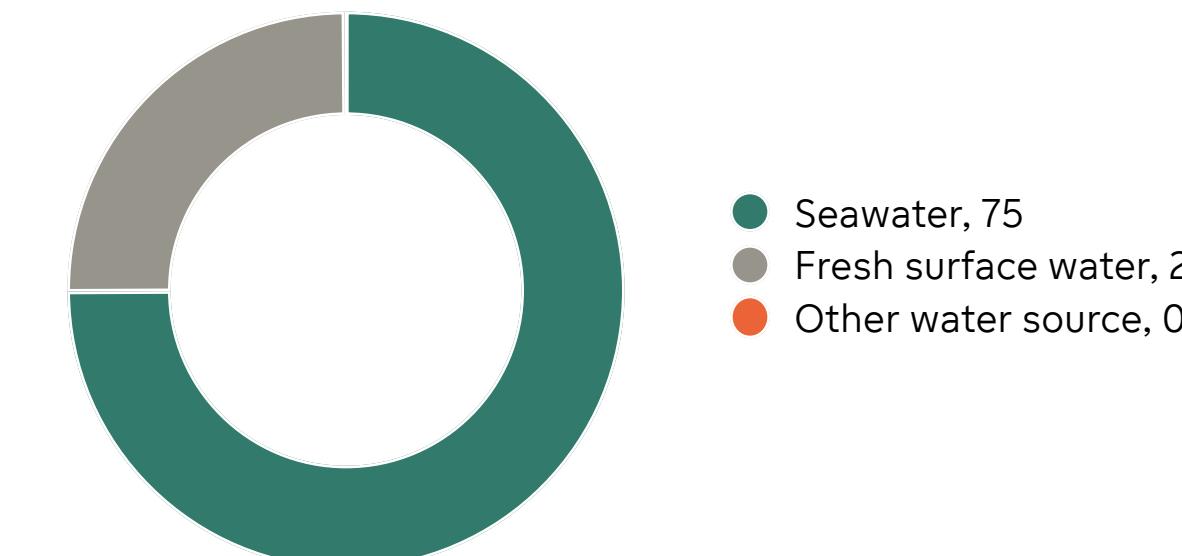
Improving the efficiency of water use in our operations can reduce environmental impacts, generate cost savings, ensure the acceptance of our operation, and also ensure the supply of water for other purposes and for other users.

Water withdrawal and forms of water use

The majority of our power and heat production using water is located in the Nordic countries, Russia, Central Europe and the UK. The Baltic Sea, the North Sea, and local freshwater systems are our most important water sources. Brackish water of the Baltic Sea is reported here as seawater. We also collect and use rainwater, in some cases; this water is included in fresh surface water in our reporting. Additionally, small amounts of municipal water and fresh groundwater are used at power plants and in waste treatment services. The reported water withdrawal, water use, and discharge volumes are based on measurements and on calculations of water consumption.

In 2020, Fortum's, excluding Uniper, total water withdrawal was 2,008 (2019: 2,093) million m³, 95% of which was used for cooling. For now consolidated figures are only available for cooling water use, not for total water use.

Water withdrawal for cooling, %¹⁾



1) Uniper consolidated as of Q2/2020

Cooling water in energy production

Condensing power production requires large volumes of cooling water. Fortum's cooling water withdrawal in 2020 was about 4,967 million m³, of which seawater accounted for about 75%.

Cooling water is used at several condensing and CHP plants. The cooling water is in almost all cases withdrawn from a local water system, such as a sea, lake, or river. Several power plants, e.g. in Russia and Germany, use cooling towers in which some of the cooling water evaporates into the atmosphere.

47% of Fortum's total cooling water use takes place at two nuclear power plants, at Loviisa in Finland and at Oskarshamn in Sweden. Both use direct seawater cooling. No water is consumed in the cooling process, and water withdrawn from the sea is discharged back into the sea, albeit at a warmer temperature within permit limits. The thermal load discharged into the sea with cooling water from nuclear power was 26 TWh.

Process water

A thermal power plant needs water in the water-steam cycle when electricity is generated with a steam turbine. Because of leaks in the pipes, occasionally water must be added to the water-steam cycle.

Water is also needed in power plant auxiliary processes, for example in flue-gas cleaning with wet scrubber technology, and in radioactive waste handling and storage at nuclear power plants. Water is also used in processes at waste treatment facilities, e.g., for ash treatment.

District heating water

Fortum is a supplier of district heat in, among others, Russia, Finland, Norway, Germany, the Netherlands and Poland. Water is used as the heat transfer medium in district heating. Because of leaks in district heating pipelines, make-up water must be occasionally fed into district heating networks.

Hydropower production

Fortum produces hydropower from water flowing in rivers in Sweden, Germany, and Finland. Our hydropower production in the Nordic countries is not in water-stressed areas. Water is not consumed in hydropower production, the water quality is not significantly changed, and it is not typically directed to another water system. However, the water system is often regulated for hydropower production, and the regulation changes the water flow and level patterns compared to their natural state. The water use-related projects implemented with stakeholder groups are reported in the section **► Corporate citizenship**.

We have precise knowledge of the water situation in those waterways where we produce hydropower, and we use real-time hydrological forecasts in production planning. Fortum doesn't report river flows as a hydropower production-related water withdrawal.

We stock fish to offset impacts of hydropower production. Some of the fish are farmed at our own fish farms. The majority of the fresh water withdrawn for fish farming is returned into the bodies of water with only a slight change in its properties. Discharged water is purified, when necessary, and its nutrient content is monitored in line with permit conditions.

In addition to storage and run-of-river hydropower, Uniper has pumped-storage hydropower plants in Germany. These plants are a

type of hydroelectric energy storage used by electric power systems for load balancing.

Water use in water-stressed areas

According to the **► WRI Aqueduct Water Risk Atlas**, accessed on 26 February 2021, the Pavagada 250-MW solar power plant in India is in an area with an extremely high (> 80%) water-stress level. The operations in areas with a high (40–80%) water-stress level include 14 condensing and CHP power plants in Germany, the UK, Russia and Poland, hydropower plants on the River Main (37) and in other locations (8) in Germany, as well as an oil production facility in the UAE. The classification of water-stressed locations is based on the WRI Aqueduct data, not on actual issues of water scarcity experienced in our operations.

Our cooling water withdrawal in water-stressed areas was 356 million m³, which was about 7% of our total cooling water withdrawal. 66% of the cooling water withdrawal in water-stressed areas was in Russia, 34% in Germany, 0.1% in the UAE, and 0.02% in Poland. The plants in the water-stressed area in the UK are not using cooling water, but process water only.

The Argayash CHP plant, located in a water-stressed area in Russia, withdraws cooling and process water from a nearby lake. The water volume of the lake can be maintained with water pumped in from another lake. In 2017, the water level of the lake, which is the source of the plant's water supply, was lowered. The volume of pumped water was increased and the level of the lake began to stabilise. In 2020, the lake's water level was at a sufficient level to supply the plant with water. Fortum also has an ongoing investment project to improve water use efficiency in ash processing at the Argayash CHP plant. The engineering study was finalised in 2020, and the project is continuing according to the plan. When the investment project is completed in 2026, water will be returned to the plant's production process, thereby reducing the amount of water withdrawal.

Even though our water use in India is minimal, we aim to reduce water use in the water-stressed country. We use robotic waterless

Water withdrawal for cooling in water-stressed areas in 2018–2020 (GRI 303-3)¹⁾

million m ³ , i.e. 1,000 megalitres	2020	2019	2018
Seawater	91	0	0
Fresh surface water	265	274*	257*
Municipal water	0.006	0	0
Total water withdrawal for cooling	356	274*	257*

¹⁾ Uniper consolidated as of Q2/2020

*Calculation principle changed due to alignment with Uniper.

cleaning solutions to clean solar panels. At the end of 2020, about 68% of Fortum's solar capacity (including co-owned plants) in India was cleaned using robotic waterless cleaning; the target is to increase the share to 80% by the end of 2021. In 2018, Fortum sold its majority share in the Indian solar power plants. Thus our water withdrawal in water-stressed areas in India covers only the Pavagada 250-MW solar plant, which uses groundwater and was commissioned in 2019. At the Pavagada power plant, we use waterless solar panel cleaning on 92% of the panels. The Jaisalmer 250-MW solar plant will have 100% waterless cleaning from its commissioning in early 2021.

Fortum's, excluding Uniper, total water withdrawal in water-stressed areas, was 283 (2019: 323) million m³. Of this, 0.0012% was in an extremely water-stressed area in India.

Water discharge

We pipe the majority of cooling water back into the same water system from which the water was withdrawn. In 2020, 99% of the cooling water withdrawn was discharged back to the environment; the corresponding figure in water-stressed areas was 93%. The total cooling water discharge was 4,910 million m³.

In addition to the cooling water discharge, Fortum discharges process water and wastewater. In 2020, Fortum's, excluding Uniper, total water discharge was 1,930 (2019: 2,017) million m³: only 3% of it was process and wastewater, the rest was cooling water. The process and wastewater is purified, when needed, before release into the environment; some water is piped to municipal treatment plants.

Emissions into water are reviewed in the section ▶ **Emissions to water**.

Water consumption

Our water consumption includes, e.g., cooling water that has evaporated from cooling water towers, water leakage from district heating networks, water used in power plant and other production plant processes, ▶ **water used to move ash**, e.g. at CHP plants in Russia, and water used to clean solar panels. In 2020, our cooling water consumption was about 57 million m³. In water-stressed areas, our cooling water consumption was about 24 million m³. We estimate cooling water consumption as the difference between cooling water withdrawal and discharge.

- ▶ Our water responsibility in terms of the aquatic habitat
- ▶ Our water responsibility in terms of emissions to water
- ▶ Water treatment services for customers

Cooling water discharge by recipient in 2018–2020 (GRI 303-4)¹⁾

million m ³ , i.e. 1,000 megalitres	2020	2019	2018
Sea	3,746	1,440	1,508
Fresh surface water	1,165	523	496
Cooling water discharge total	4,910	1,963	2,003

1) Uniper consolidated as of Q2/2020. The figures include the separately reported cooling water discharge in water-stressed areas.

Cooling water discharge by recipient in water-stressed areas in 2018–2020 (GRI 303-4)¹⁾

million m ³ , i.e. 1,000 megalitres	2020	2019	2018
Sea	91	0	0
Fresh surface water	241	257	242
Cooling water discharge total	332	257	242

1) Uniper consolidated as of Q2/2020



Biodiversity

The degradation of biodiversity is one of the biggest environmental problems globally. We need to know our impacts and dependencies on biodiversity and ecosystem services to be able to assess the related risks and opportunities.

Biodiversity rising on global, EU and Fortum's agenda

In 2020, the EU published its ambitious Biodiversity Strategy for 2030. Fortum supports the strategy and its aim to protect and restore species and habitats. We actively follow the development of concrete actions in implementing the strategy as well as the anticipated post-2020 global biodiversity framework within the global Convention on Biological Diversity. Biodiversity loss and the degradation of ecosystems are a severe global concern that has to be tackled.

In Fortum's updated materiality analysis, biodiversity is now identified as one of Fortum's sustainability priorities. Fortum has also set a new Group target for biodiversity, addressing the year 2021.

Impacts on biodiversity

Our operations in, e.g., hydropower production in Sweden, Germany, and Finland impact local biodiversity. Construction of hydropower and water regulation related to hydropower alter the conditions in water systems and thus impact the diversity of the local aquatic habitat and, in particular, the fish population. However, hydropower is important in the fight against climate change, which is globally one of the greatest threats to biodiversity. Emissions from fossil fuel-based energy production may decrease biodiversity also locally. Increasing CO₂-free production mitigates the biodiversity loss caused by climate change. Construction of all facilities may have impacts on biodiversity.

Indirect impacts may be caused by, for example, procurement of biomass for use as fuel or raw material, as well as the procurement of other fuels.

≥12
Target for 2021: Number of major voluntary measures enhancing biodiversity

Our responsibility for biodiversity

Fortum's [► Biodiversity Manual](#) defines the company's, excluding Uniper, principles related to biodiversity. According to the manual, biodiversity issues are systematically considered as part of our environmental management processes and our operations. The manual contains specific instructions for biodiversity issues in current operations, new projects and the supply chain, as well as for reporting and communication. We annually update our [► Biodiversity Action Plan](#), which contains ongoing and planned voluntary biodiversity-related measures. In 2020, the measures in the Action Plan were related to hydropower production in the Generation Division. The Biodiversity Action Plan describes Fortum's, excluding Uniper, goals, responsibilities, timelines and partners for biodiversity projects.

We aim to improve biodiversity in connection with our operations, we carry out biodiversity-related projects, and we collaborate with our stakeholders in projects. We also assess the biodiversity impacts of our new projects and aim to mitigate them. Additionally, we offset and reduce the biodiversity impacts of hydropower production. In 2020, Fortum carried out fish obligations, valued at about EUR 2.9 million, in hydropower production. The value of the several types of voluntary environmental projects in hydropower, excluding Uniper, was more than EUR 680,000.

Managing impacts in the supply chain

We manage the biodiversity impacts of our fuel procurement by using international certification and assessment systems. We pay special attention to the procurement of wood-based biomass and coal.

The biofuel sustainability criteria defined in the EU Renewable Energy Directive (RED II) in 2018 are currently being implemented nationally. Fortum is closely following the development of guidelines by national authorities and preparing to implement the required additions to our current biomass sourcing processes. We are also following the assessment of the RED II sustainability criteria by the EU in 2021, the objective of which is to ensure that EU regulatory framework on bioenergy is in line with the increased ambition set out in the European Green Deal.

Certified wood-based biomass fuel originates from sustainably managed forests in which the preservation of biodiversity has been a focus. In 2020, we used wood-based biomass fuel in our power plants in Finland, Norway, Poland, the Netherlands and the Baltic countries. Nearly 50% of the wood-based biomass fuel purchased by Fortum, excluding Uniper, originated from certified or controlled sources. For Uniper, this figure was 100%.

Fortum and Uniper are members of the Bettercoal initiative and use the Bettercoal Code and tools in assessing the sustainability of the coal supply chain. Biodiversity aspects related to coal mining are covered in Bettercoal assessments. Assessment criteria are related to, e.g., preventing the disappearance or fragmentation of habitats, combating invasive species, and preventing adverse hydrological changes, nutrient accumulation and environmental pollution. For Fortum, excluding Uniper, 39% of the coal purchase volume (calculated in euros) in 2020 came from suppliers whose mines have undergone a Bettercoal site-assessment. Calculated in tonnes, the share was 53%. For Uniper, the coal purchased via direct contracts from suppliers that have endorsed the Bettercoal Code was 68% at the end of 2020.

[► Sustainable fuel purchasing](#)

Habitat restoration and other projects

Most of our habitat restorations and other projects improving biodiversity are related to hydropower production. Additional information about our voluntary hydropower-related projects supporting biodiversity is available in the Biodiversity Action Plan and on our [website](#).

New biodiversity target for Fortum Group for 2021

Fortum has set a new biodiversity target for year 2021: at least 12 major voluntary measures enhancing biodiversity. These measures, focusing on threatened species or habitats, improve the living conditions of species and strengthen populations. Measures planned for 2021 are mainly related to hydropower production and typically include restoring aquatic and terrestrial habitats, improving fish migration and strengthening migratory fish populations, and projects combating invasive species.

Innovative solutions for migrating fish

To strengthen the lifecycle of fish, we use a number of solutions, like fish stocking, habitat improvements, various types of fishways, and trap and transport systems for fish to pass the dams. In 2019 and 2020 at the Spjutmo power plant on the River Dalälven in Sweden, a Finnish fishway innovation called Fishheart was tested. Fishheart uses water pressure to help fish pass migration obstacles.

We also installed a fish transportation system, called Whooshh, at the Forshaga power plant on the River Klarälven in Sweden. The system enables the smooth transportation of salmon and trout from a trap to a truck and further to upstream spawning areas. The installation of Whooshh was the first in Sweden.

In Finland, we transported the first salmon and trout spawning couples from our trap and transport device in Montta, River Oulujoki, over several dams to restored habitats in River Utosjoki, a tributary of Oulujoki. Uniper has continued its voluntary trap and transport programme of endangered eels in the River Main in Germany and the stocking of young eels in the River Ätran in Sweden.



River continuum restoration projects

We have continued our programme of dismantling small dams in Sweden. The programme has a total of about 80 dams that are no longer significant for water regulation and energy production. In conjunction with the dam removal work, the river continuum is restored and stream water habitats can be re-established. The projects are implemented in close collaboration with local actors and residents. In 2020, we submitted applications to the Swedish Environmental Court to remove seven dams.

At the Mörrum River in Sweden, Uniper removed the dam in Marieberg in 2020. As it was the closest one to the sea, the removal enhances the connectivity in the lower part of the river and restores habitats for fish and other stream-living organisms. It also strengthens the effects of measures that have previously been carried out further up the river. The environmental benefits are great and the loss of production relatively small. The Mörrum River is a Nature 2000 area and has significant nature values, including populations of endangered thick-shelled river mussels and Baltic salmon. The river is also important for recreational fishing. Uniper is the largest contributor and is responsible for the project with co-financing from stakeholders, the KK foundation and the European LIFE foundation.

Restoring habitats

In summer 2020, Fortum financed the restoration of the River Myllypuro in Paltamo, Finland, as part of our fish obligations. The purpose of the restoration was to improve the living conditions of local trout. The restoration was carried out as part of a river restoration course and in cooperation with the fisheries-related stakeholders in the area.

Restoration of Kokkasaari, an island in River Vuoksi in Finland, was made in cooperation with the municipality of Imatra and local environmental and fish authorities. In the project, the island of Kokkasaari was lowered and transformed as a shallow habitat for trout and grayling. The restoration was planned to function with the different water levels of a regulated river.

Examples of habitat restorations and improvements in 2020

Site	Waterway, country	Target species of restoration	Type of restoration	Total area restored (m ²)
Kokkasaari	River Vuoksi, Finland	Trout, grayling	Creating fish habitat: lowering island and shaping river bed, adding gravel	8,000
Myllypuro	River Oulujoki, Finland	Trout	Removing beaver-made damming structures in the river, adding stones and gravel	300
Untra area, Rämsön	River Dalälven, Sweden	Beetles and woodpeckers	Removing fir trees, creating dead wood, clearing around oak trees	46,000 (the whole area, partly improved)
Multiple hydropower plants	River Klarälven, Sweden	Insect fauna	Terrestrial improvements: removing invasive Canadian golden rod, cutting young trees, ring barking of trees	11,000
Litzauer Schleife (Litzau Loop)	River Lech, Germany	Huchen, nase, barbel, ringed plover	Side arm connection, riverbed shaping: inserting spruce and installing winter stalls	13,000

The Litzauer Schleife (Litzau Loop) is located between Uniper's Dessau and Dornau hydropower plants on the River Lech in Germany. The loop stretches for about 15 km of free flow and forms a species-rich nature reserve. In cooperation with the local water management authority, Uniper is carrying out a project in which the habitats for fish and birds are being upgraded and spawning grounds are being created. In winter 2020/2021, a side arm was connected to create a flow-reduced zone for juvenile fish. Spruce was also inserted to guide the flow and winter stalls were created.

to benefit plants and insects, and butterflies in particular, which thrive in meadowland with calcareous soil. The project also aims to use the butterfly path and landscape to educate children and young people. During 2020, sandy habitats for solitary bees were created and meadows were restored in the project.

► Environmental impacts of hydropower production

Biodiversity actions related to other operations

In Sweden, we are taking part in the project coordinated by the Kumla municipality to build a butterfly path in the area close to our waste treatment facility. The aim of the butterfly path project is to increase the biodiversity in the area and to restore former grasslands

Circular economy

Challenges for fast growing metropolitan areas and growth centres include not only the management of emissions, but also growth in waste volumes. Reliable waste management and resource efficiency are important in a sustainable society. We offer customers sustainable circular economy services and expert solutions for waste recycling. We also recover by-products and wastes generated in our own energy production whenever possible.

Waste received from customers

Fortum's aim is to promote resource efficiency, for example, through its recycling and waste business, and the transition towards a more extensive circular economy. By circular economy, we mean that materials are utilised as efficiently as possible and hazardous materials are removed from circulation. The aim is to make new raw material from waste whenever possible and to keep valuable materials in circulation.

Our circular economy business expands

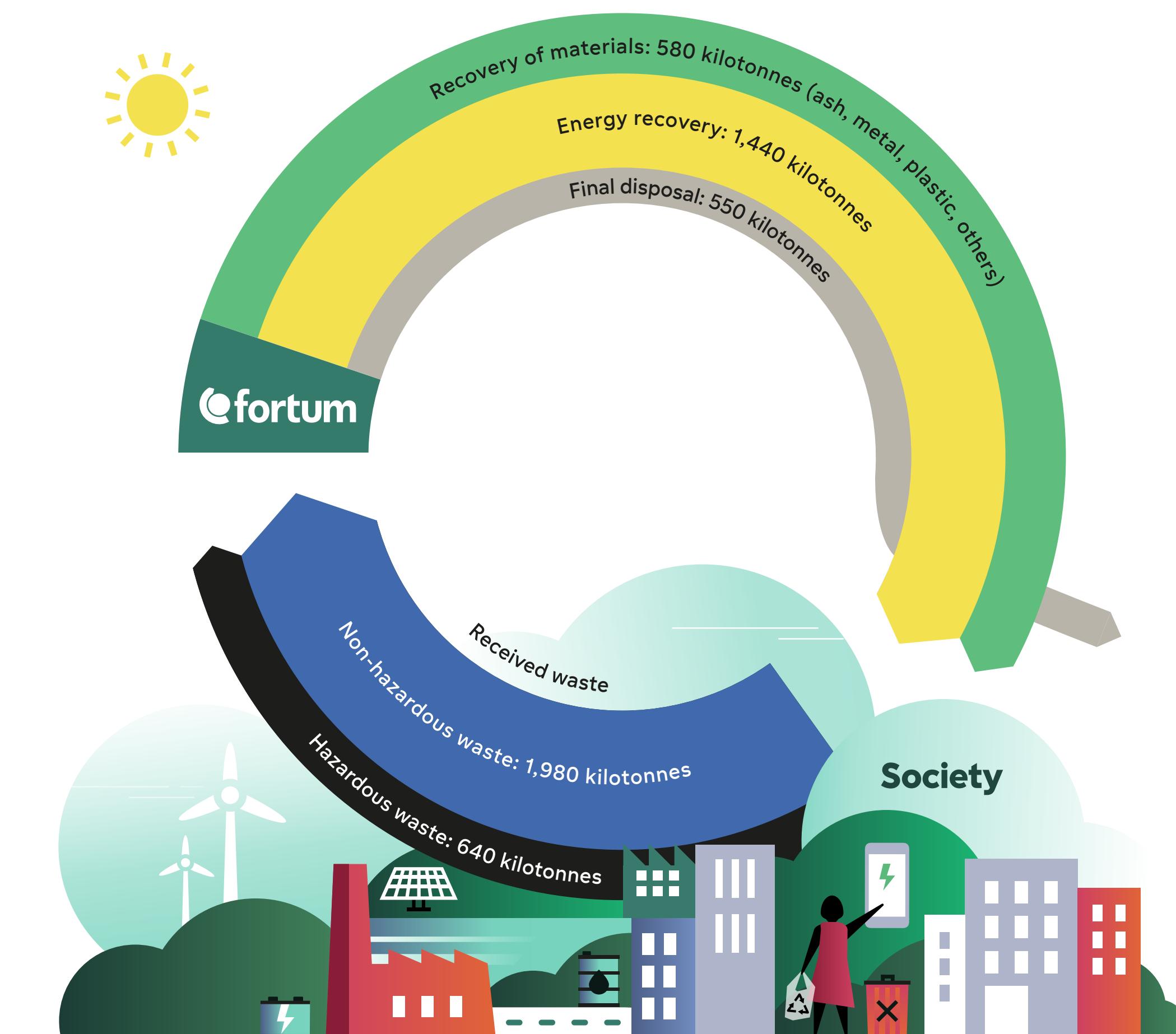
Fortum has started the consolidation of Uniper's circular economy related operations in sustainability reporting. At ▶ **BauMineral** in Central Europe, Uniper receives and treats by-products, such as bottom ash, fly ash and gypsum, from power generation customers. BauMineral recycles by-products from power plants into new building materials.

In 2020, Fortum acquired the entire shareholding in the Finnish metal recycling company Crisolteq. The investment strengthens Fortum's position in the recycling of high value materials in Europe. The recycling of valuable metals also supports Fortum's existing material recycling business.

Fortum has a hydrometallurgical pilot facility in Harjavalta, Finland, which processes metals from industrial waste and by-products received from customers. Fortum also plans to build a new plant for recycling valuable EV battery materials in Harjavalta. In early 2021, Fortum will open a new mechanical EV battery recycling process line located in Ikaalinen, Finland, and then Fortum's mechanical recycling process in Ikaalinen will be connected to the hydrometallurgical process in Harjavalta. Together these two processes are estimated to reach a recovery rate of up to 95% of the metals included in the valuable materials of a battery's black mass.

Fortum develops new soil remediation solutions, such as ▶ **MOPS (Multi-purpose Onsite Phase Separator)** treatment technology in Denmark. Soil cleaning services are also expanding in Fortum's recycling and waste business in Sweden, in which Fortum has a new collaboration with the Veidekke company. The goal of the material recovery collaboration is that 80% of sand and gravel to consist of recycled material, thereby reducing the need for virgin sand and gravel.

Received and treated waste from customers in 2020



Our waste management services

Fortum offers waste management services for customers in the Nordic countries, Central Europe, Lithuania and Poland. As much of the waste stream as possible received from customers is recycled, reused or recovered as raw material.

Waste that is unsuitable for recycling or reuse as a material is incinerated in our waste-to-energy plants in the Nordic countries, Lithuania and Poland. This reduces the use of virgin fossil or renewable fuels in electricity and heat production. Waste that is unsuitable for recovery is disposed of at landfilling sites.

In 2020, we received a total of 2.6 million tonnes of waste from our customers, 55% of which was recovered in waste-to-energy plants. Of the waste received from our customers, about 2.0 million tonnes was non-hazardous waste, with ash accounting for 21% and contaminated soil for 15%. We also received about 640,000 tonnes of hazardous waste from our customers, with ash accounting for 10% and contaminated soil for 15%.

Recovery of materials

Various types of waste can be reused as raw materials. In 2020, of the waste received from our customers, we recovered as materials about 580,000 tonnes; recoverable ash accounted for 54% of that amount, various environmental construction materials 19%, and processed raw materials and products 15%. In addition, about 1.0 million tonnes of recoverable materials originated at Fortum's own power and heat plants globally.

We are continuously developing activities that increase the proportion of waste materials kept in circulation, among others:

- We produce ▶ **recycled plastic** out of plastic packaging waste received from customers
- We process and ▶ **recycle metals** separated from customers' waste and from ash and slag generated in customers' energy production. We also recycle scrap metals generated in the maintenance activities of our own power and heat plants
- We treat and process ash, slag, dredging masses, slurry, and contaminated water from energy production and other industries for reuse in various types of products, environmental construction and earthwork projects
- We treat contaminated soil from our customers, and we direct metal, rocks, concrete, and wood sieved from the soil for reuse as raw materials. Soil that is suitable for environmental construction is used at construction sites and at our own industrial waste treatment centres.

Hazardous waste treatment

We offer solutions to treat ▶ **hazardous waste**. We take hazardous waste out of circulation in a sustainable manner and we clean the hazardous substances from materials that end up in recycling. At the same time, we produce energy and ensure the safe final disposal of waste. High-temperature incineration is the best available solution to deactivate most hazardous substances. Additionally, some other waste types are treated with other processes, such as a physico-chemical process.

We have three high-temperature incineration plants producing electricity and district heating for the surrounding areas: in Riihimäki, Finland; Kumla, Sweden; and Nyborg, Denmark. In 2020, about 353,000 (2019: 347,000) tonnes of hazardous waste and, additionally, about 313,000 (2019: 321,000) tonnes of non-hazardous waste were incinerated at these facilities.



Waste and by-products from our energy production

Ash is a by-product generated in the incineration of solid fuels in power and heat production. Gypsum and other desulphurisation products are by-products of flue-gas desulphurisation. Ash and desulphurisation products together account for the majority share of the by-products and waste from our energy production.

The maintenance of power and heat plants generates scrap metal and other conventional industrial waste and, to a smaller extent, waste oil and other hazardous waste. We aim for the highest possible utilisation and recovery of our own by-products and waste. The waste management service providers we use are properly licensed and reliable waste management companies.

In addition to conventional industrial waste, the Loviisa nuclear power plant in Finland and the Oskarshamn nuclear power plant in Sweden generate radioactive waste, which we treat in accordance with the requirements of national nuclear energy legislation. According to Finnish legislation, nuclear waste generated in Finland has to be finally disposed of in Finland, and nuclear power plant companies are responsible for their respective nuclear waste management. Swedish legislation is similar with regard to responsibilities. The volume of radioactive waste generated is small, but special solutions are needed in its treatment and final disposal.

The total volume of by-products and waste generated at all Fortum's power and heat plants in 2020 was about 1.7 million tonnes. Of this volume, about 75% was recovered.

Ash and gypsum as by-products

About 69% of the ash from our plants operating in Europe is utilised as a raw material, for example, for the construction industry, road construction and soil improvement, and as backfill. Ash from the coal-fired power plants in Russia is stored, e.g., in ash basins, because there is no industrial solution for the use of wet ash sludge in Russia. Coal-fired power plants can also generate either a wet or semi-dry desulphurisation by-product in the flue-gas cleaning systems.

In 2020, about 1.2 million tonnes of ash and 366,500 tonnes of gypsum were generated. By-products that cannot be utilised are transported to the appropriate final disposal at landfilling sites or, e.g., to ash basins in Russia. The reported volumes of ash and gypsum from our European power plants are mainly based on the weighing of the truckloads. Ash volumes at our Russian power plants are calculated on the basis of the ash content of the coal.

Ash and gypsum handling in energy production plants in 2018–2020 (GRI 306-3, GRI 306-4, GRI 306-5)¹⁾

t	2020	2019	2018
Ash recovery	850,600	340,000	370,000
Ash disposal	375,700	360,000	360,000
Gypsum recovery	361,700	1,600	3,300
Gypsum disposal	4,800	0	15

1) Uniper consolidated as of Q2/2020

Conventional and hazardous waste

Conventional waste generated during the operation and maintenance of power and heat plants is sorted, and waste that can be recycled, such as metal, is sent for further processing. Hazardous waste is delivered to licensed hazardous waste treatment facilities. In 2020, the power and heat plants generated a total of about 87,700 tonnes of waste, about 12,300 tonnes of which was hazardous waste.

By the end of March 2020, Fortum's Inkoo coal-fired power plant was demolished to ground level. In 2020, the demolition project generated a total of about 22,900 (2019: 38,400) tonnes of waste, about 5,600 (2019: 3,000) tonnes of which was hazardous waste. In 2017–2020, about 90% of the demolition materials was recovered in the project. The equipment was recycled to Fortum's own power plants or sold as spare parts to other power producers.

The reported volumes of non-hazardous and hazardous waste are based mainly on the information provided by the waste management companies.

Waste handling in energy production plants in 2018–2020 (GRI 306-3, GRI 306-4, GRI 306-5)¹⁾

t	2020	2019	2018
Material recovery of non-hazardous waste	33,300	6,100	8,900
Energy recovery of non-hazardous waste	1,600	600	500
Final disposal of non-hazardous waste	40,400	24,500	23,500
Material recovery of hazardous waste	1,200	500	450
Energy recovery of hazardous waste	1,800	300	300
Disposal of hazardous waste	9,300	500	1,000
Total	87,700	32,400	34,700

1) Uniper consolidated as of Q2/2020

Radioactive waste

The Loviisa nuclear power plant's low-level radioactive maintenance waste is disposed of in Loviisa's repository in Finland. The Oskarshamn nuclear power plant's low-level radioactive maintenance waste is disposed of according to the latest landfill technology at the Simpevarp landfill site near the Oskarshamn power plant in Sweden. In 2020, 107 m³ of low-level radioactive waste went to final disposal.

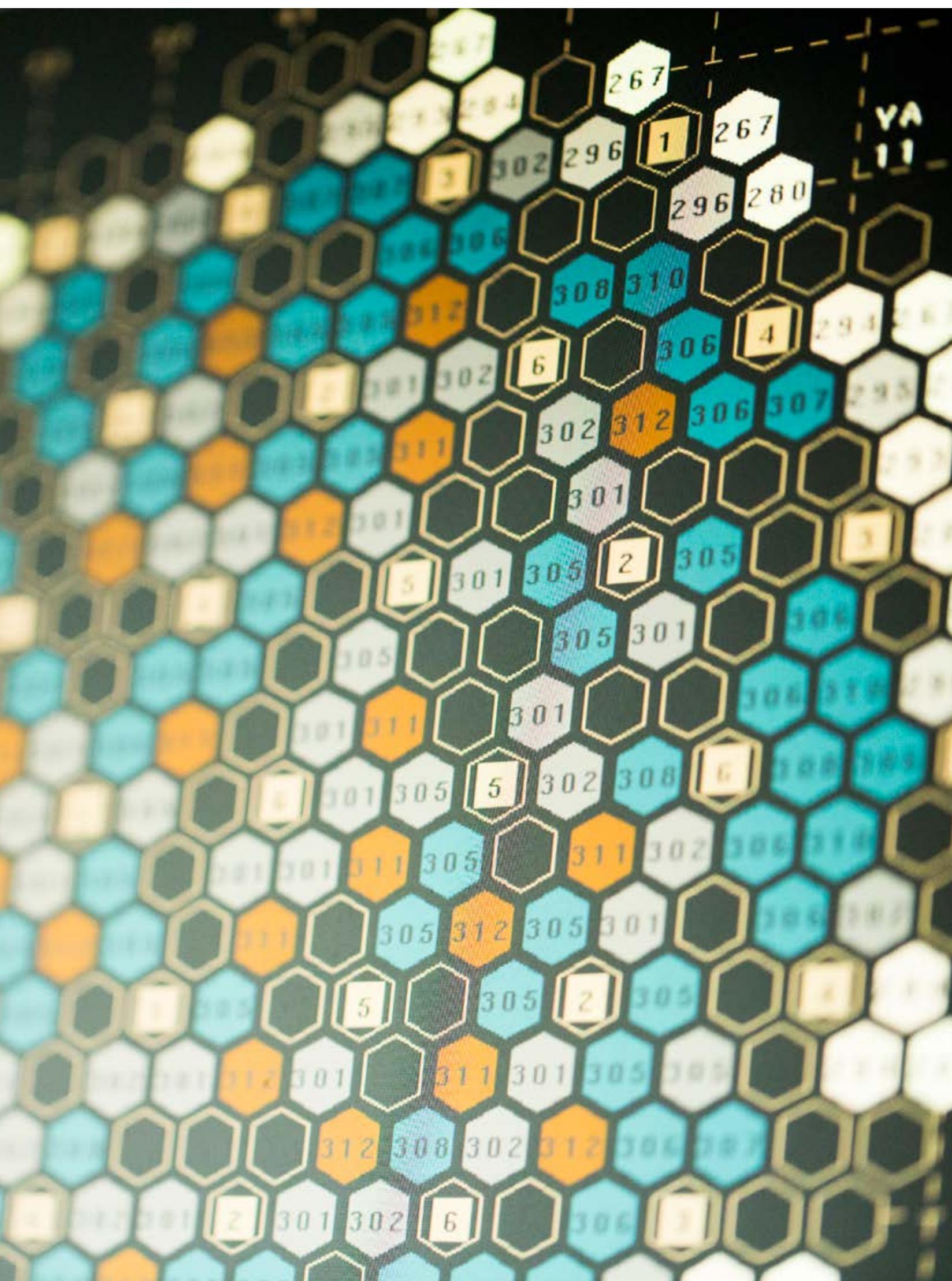
Intermediate-level radioactive liquid is generated mainly from spent ion exchange resins and wastewater from the controlled area at the Loviisa nuclear power plant. Liquid waste is processed into solid form at the solidification plant for liquid radioactive waste before final disposal in Loviisa's repository. The Oskarshamn nuclear power plant's intermediate-level radioactive waste is transported to the final repository outside the Forsmark nuclear power plant, Sweden. In 2020, 558 m³ of intermediate-level radioactive waste went to final disposal.

High-level radioactive waste from spent nuclear fuel is stored in an interim storage at the Loviisa power plant site in Finland. In Finland, Fortum and Teollisuuden Voima have established Posiva Oy to handle the technical implementation of the final disposal of spent nuclear fuel, and final disposal is scheduled to begin at Olkiluoto in Eurajoki around the mid-2020s. The final disposal of Loviisa's spent nuclear fuel will begin in the 2040s.

The high-level radioactive waste from spent nuclear fuel at the Oskarshamn power plant unit is transported to the Clab, Central Interim Storage Facility for Spent Nuclear Fuel, pending final disposal. The Clab is located at Simpevard in Sweden. The spent nuclear fuel will be eventually transported to the future Spent Fuel Repository in Forsmark, Sweden. In 2020, 46.3 tonnes of spent nuclear fuel was removed from nuclear power plant reactors in Finland and Sweden.

In addition to radioactive waste from nuclear power plants in operation, the decommissioning and dismantling projects at the Barsebäck 1 and 2 and the Oskarshamn 1 and 2 nuclear power plant units in Sweden also generate radioactive waste. In 2020, 1,521 tonnes of low-level and 154 tonnes of intermediate-level radioactive waste from the decommissioning projects went into final disposal in Sweden.

- ▶ [Nuclear waste management at Loviisa in Finland](#)
- ▶ [Final disposal of spent nuclear fuel in Finland](#)
- ▶ [Nuclear waste management at Oskarshamn in Sweden](#)
- ▶ [Spent nuclear fuel and radioactive waste management in Sweden](#)



Case | Responsible final disposal of nuclear waste

Finland is one of the most successful countries in the use of nuclear energy; the country's four nuclear power plant units have achieved the world's highest load factors every year of the 21st century. Nuclear power produces almost a third of the country's electricity.

In Finland, the management of the entire power plant life cycle is a precondition for sustainable nuclear electricity production. Posiva, founded by its owners Fortum and TVO (Teollisuuden Voima), will conduct the final disposal of spent nuclear fuel from both currently operational nuclear power plants, Loviisa and Olkiluoto, in a responsible manner.

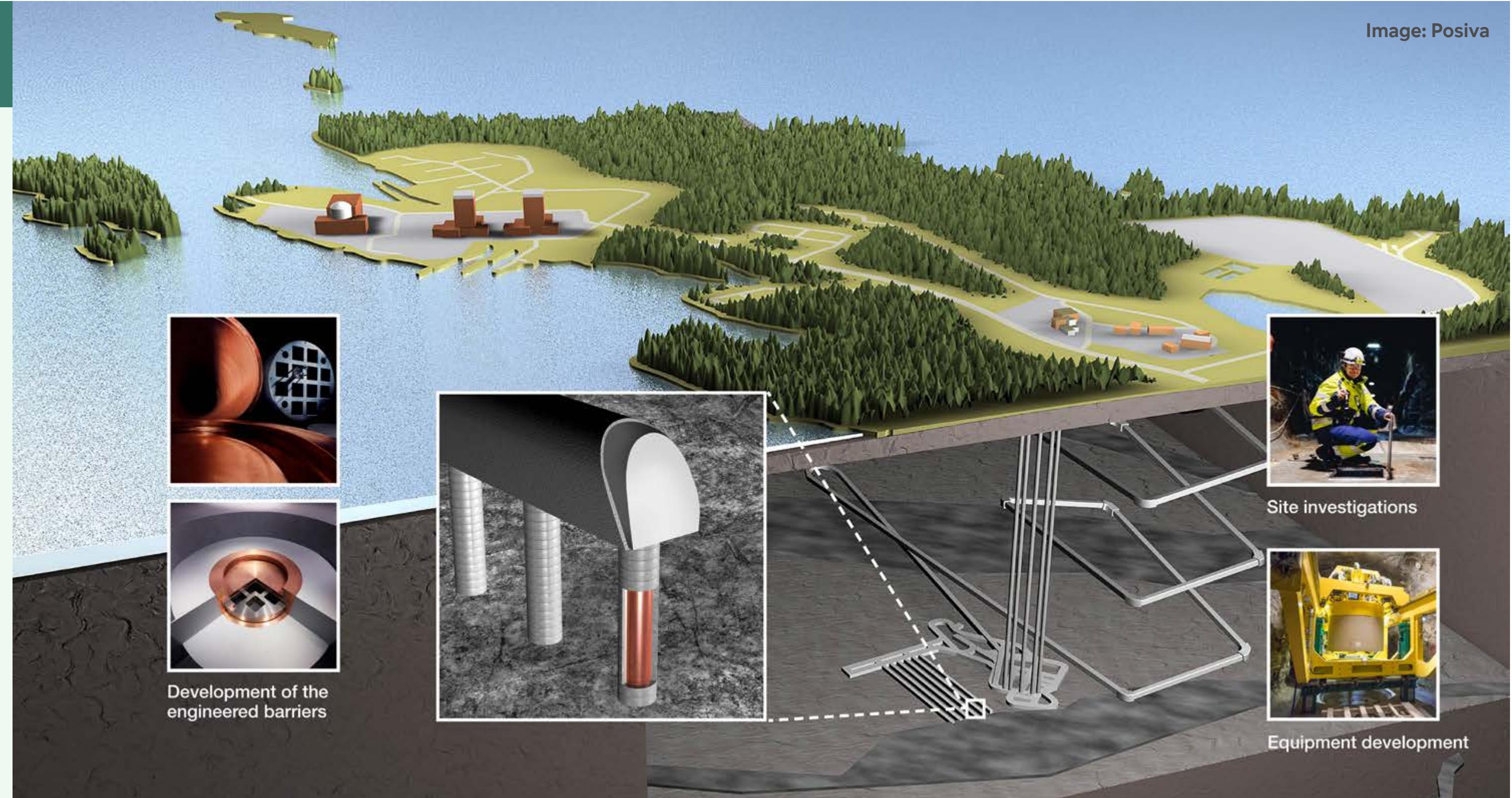
Final disposal begins in Finland, the first in the world

The deployment of the final disposal of spent nuclear fuel is planned to begin in Finland around the mid-2020s. Final disposal of Fortum's Loviisa power plant's spent nuclear fuel is scheduled to begin in the 2040s.

The final disposal facility for spent nuclear fuel will be constructed within the solid Olkiluoto bedrock with no major fractures at a depth of 400–450 meters. The potential effects of changes above ground and in the atmosphere, and the effects of human activities on the immediate surroundings of the repository, have been taken into account in the design of the final disposal concept.

Final disposal is based on the use of multiple release barriers, which guarantee that nuclear waste cannot come into contact with organic nature or people. These barriers include the state of the fuel, the final disposal canister, the bentonite buffer, the backfilling of the repository tunnels and the surrounding Olkiluoto bedrock.

The final disposal solution for spent nuclear fuel has also been examined through environmental impact assessments. Environmental responsibility for final disposal is also on a financially sustainable foundation because, in Finland, nuclear power companies must cover the costs of nuclear waste management, and the requisite funds are set aside in the State Nuclear Waste Management Fund.



FACTS

- Olkiluoto has been selected as the final disposal site on the basis of site surveys and a safety analysis.
- Olkiluoto bedrock is crystalline bedrock, which constitutes the majority of Finnish bedrock. Finnish bedrock is among the oldest in the world.
- The final disposal facility will be at a depth of approximately 430 meters.
- Total length of the ONKALO® tunnels is 42 km.

Personnel and society

Targets

SAFETY:

- Total Recordable Injury Frequency (TRIF) <1.0 by the end of 2025

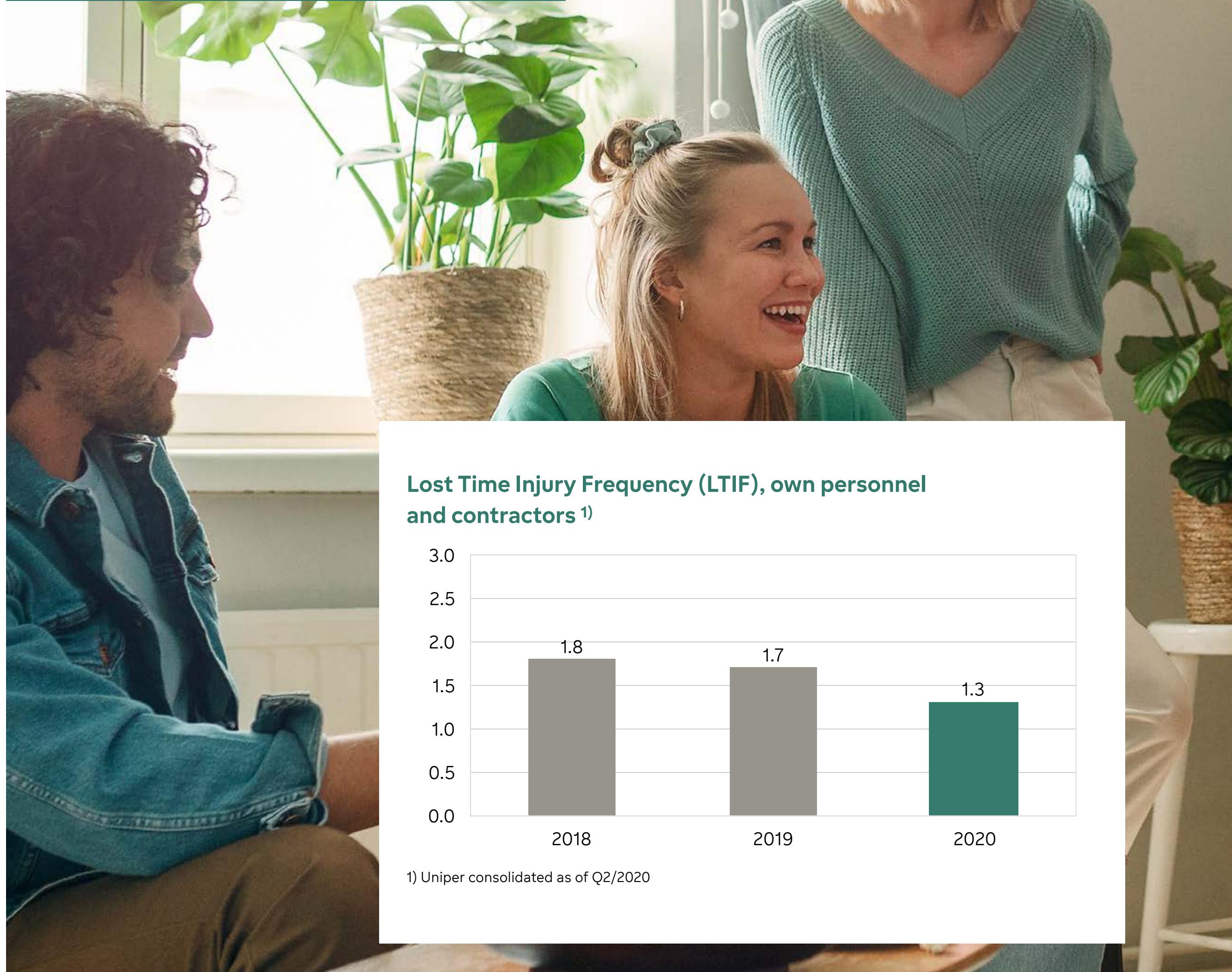
GENDER EQUALITY:

- Fortum, excluding Uniper: Board consisting of at least 40% of women and men each by 2020, in compliance with the principles issued in the Finnish Government Resolution
- Uniper: women to account for 25% of top executives by June 2022

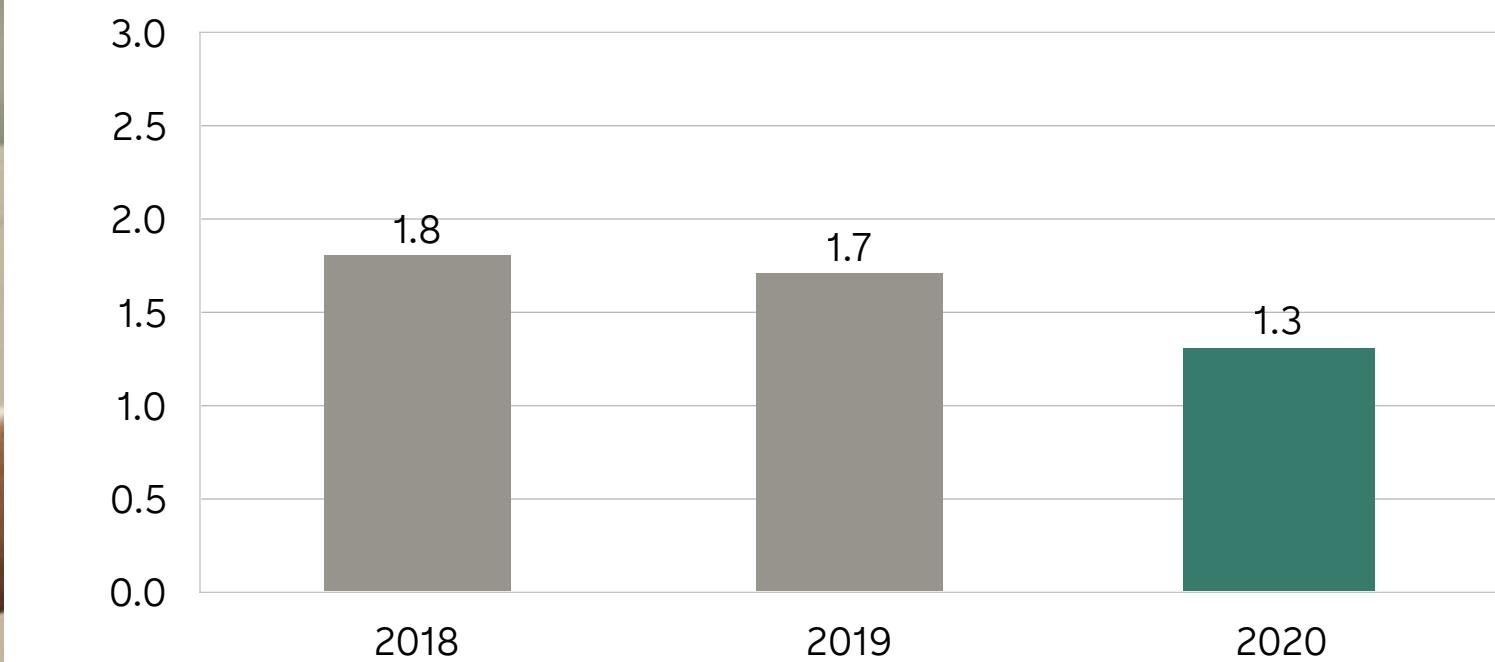
Contribution to the UN SDGs



Cooperation started with ten civil society organisations to support their Covid-19 response



Lost Time Injury Frequency (LTIF), own personnel and contractors¹⁾



¹⁾ Uniper consolidated as of Q2/2020

Sustainability priorities related to personnel and society

In terms of Fortum's operations, the sustainability priorities for personnel and society include:

- Employee wellbeing, health and safety
- Business ethics and compliance
- Corporate governance
- Labour rights
- Human rights
- Diversity and equal opportunity
- Innovation and digitalisation
- Stakeholder engagement
- Economic value creation
- Customer rights and satisfaction

Our key figures for personnel and society are presented in the table.

► Business ethics and compliance

Key figures for personnel and society

	2020	2019	2018
Average number of employees	19,988*	8,248	8,767
Number of employees, 31 December	19,933*	8,191	8,286
Departure turnover ¹⁾ , % of permanent employees	7.4	11.2	16.1
Female employees ²⁾ , %	27	32	32
Females in management ²⁾ , %	27**	30	30
Sickness-related absences ³⁾ , %	2.9	2.9	2.8
Lost Time Injury Frequency (LTIF) ^{1) 4)} , own personnel	0.7	0.8	0.2
Lost Time Injury Frequency (LTIF) ^{1) 4)} , contractors	2.2	3.3	4.8
Severe occupational accidents ^{1) 5)} , own personnel and contractors	1	1	4
of which fatalities, own personnel	1	0	0
of which fatalities, contractors	0	0	2
Safety-certified ^{1) 6)} operations in power and heat production, % of sales	98.8	96.5	97.0
Supplier audits ³⁾ , number	6	14	13
Support to society ³⁾ , EUR million	2.5	3.0	3.8

1) Uniper consolidated as of Q2/2020

2) Uniper consolidated at year-end 2020

3) Excluding Uniper

4) LTIF = Lost Time Injury Frequency, lost time injuries per million working hours

5) Fatality or an accident leading to permanent disability or an accident with severe and life-threatening injuries

6) OHSAS 18001 or ISO 45001

* For Uniper, the figures do not include board members, managing directors, apprentices, work-study students and interns

** Calculation principle changed due to alignment with Uniper



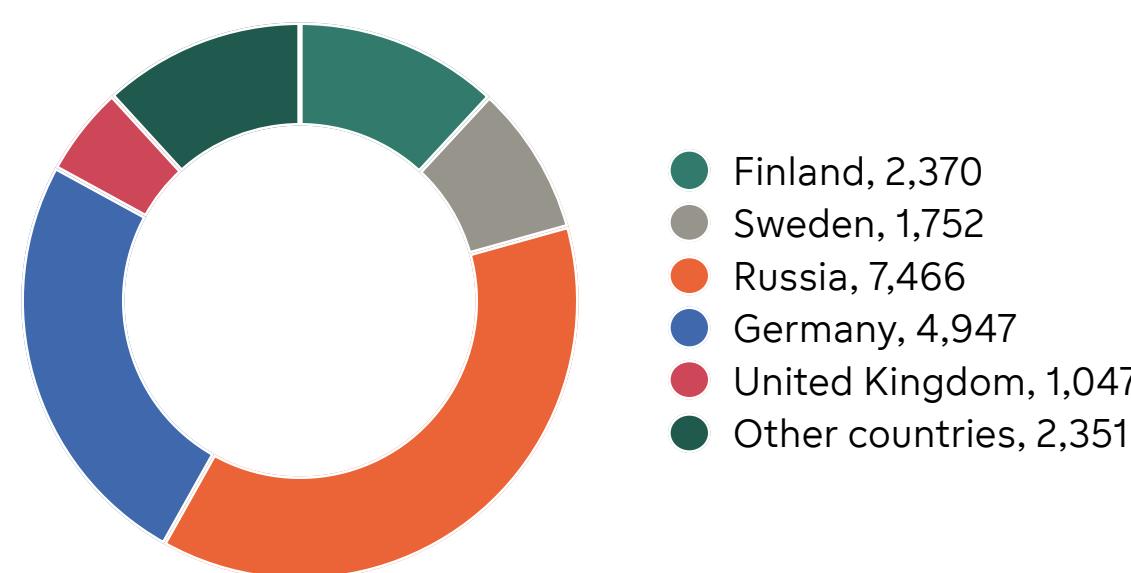
Personnel

We aspire to be a responsible employer that offers a diverse and motivating work environment and invests in personnel development and wellbeing.

At the end of 2020, 19,933 (2019: 8,191) employees worked at Fortum. The increase in the number of employees was due to the Uniper acquisition. The highest number of employees, 7,466, was in Russia. Permanent employees accounted for 94.8% of the personnel. The share of full-time employees was 98.2%. During the year, 1,293 new permanent employees joined Fortum and 1,389 employment relationships were terminated. Departure turnover in 2020 was 7.4%. Voluntary departure turnover was 5.0%.

Contractors' employees worked at Fortum sites for a total of approximately 2,407,250 days during the year. The figure is based on contractors' hourly logs and on estimates made on the basis of job costs and average hourly rates. The figure has been calculated on the basis of an 8-hour work day.

Number of employees by country, 31 December 2020



Personnel statistics from 2020, by country

	Finland	Sweden	Russia	Germany	United Kingdom	Other countries	Total
Personnel at year-end ¹⁾	2,370	1,752	7,466	4,947	1,047	2,351	19,933
male	1,632	1,255	5,478	3,678	866	1,558	14,467
female	738	497	1,988	1,269	181	793	5,466
Personnel expenses ²⁾ , million euros	208	145	120	475	95	153	1,195

1) For Uniper, the figures do not include board members, managing directors, apprentices, work-study students and interns

2) Uniper consolidated as of Q2/2020

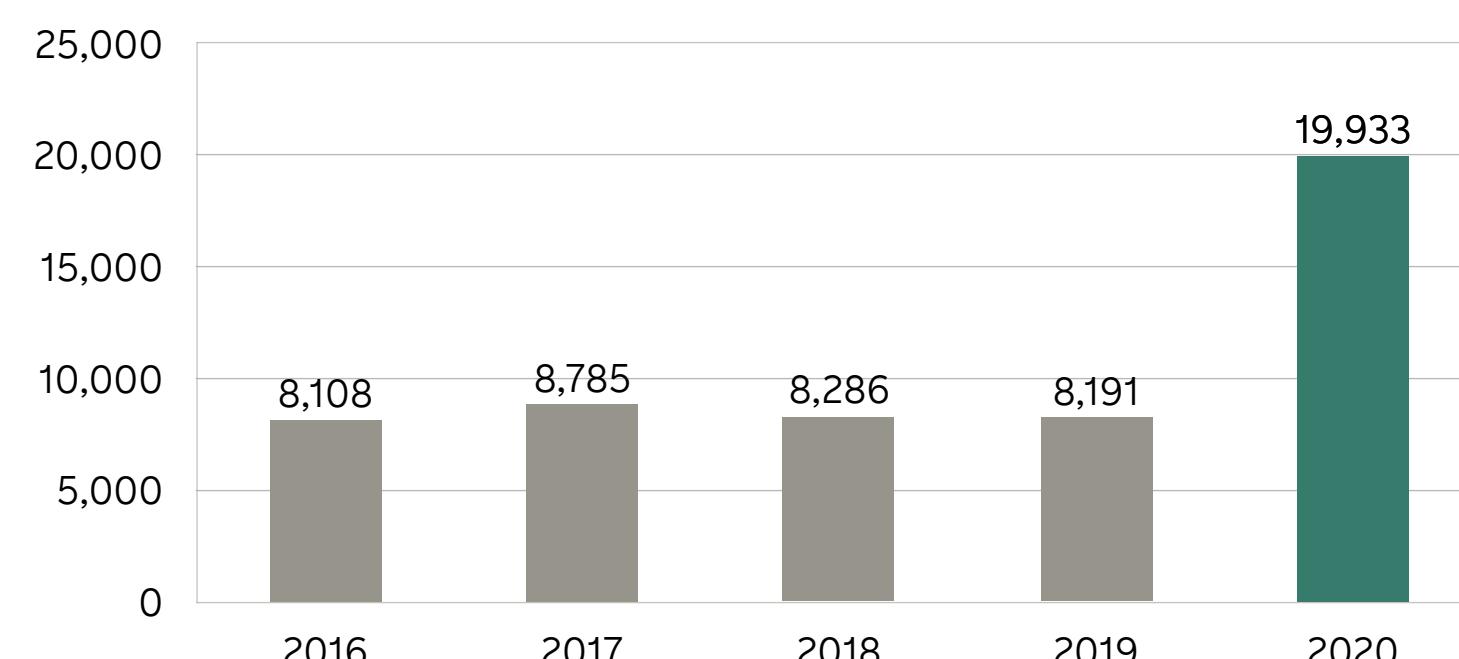
Workforce by employment contract and employment type, by country and gender (GRI 102-8) ¹⁾

Employment contract ²⁾	Finland		Sweden		Russia		Germany		United Kingdom		Other countries		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Permanent	1,582	689	1,232	488	5,231	1,750	3,483	1,147	832	168	1,532	753	13,892	4,995
Fixed-term	50	49	23	9	247	238	169	109	34	13	27	38	550	456
Employment type	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Full-time	1,605	715	1,236	466	5,486	1,988	3,800	990	859	144	1,530	746	14,516	5,049
Part-time	27	23	21	31	2	3	134	354	8	37	31	45	223	493

1) Uniper consolidated at year-end 2020

2) For Uniper, the figures do not include board members, managing directors, apprentices, work-study students and interns

Number of employees, 31 December



Personnel

Safety and security

Human rights

Stakeholders

Customers

Corporate citizenship

Supply chain

**Total number and rate of new permanent employee hires and employee turnover
by age group, gender and country (GRI 401-1)¹⁾**

New employee hires	Finland		Sweden		Russia		Germany		United Kingdom		Other countries		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
age group	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
≤20	3	2	9	3	4	1	4	0	0	0	2	0	22	6
21–30	44	14	27	27	109	19	35	21	14	3	71	43	300	127
31–40	57	21	41	16	131	30	50	19	7	2	77	33	363	121
41–50	42	20	19	10	57	17	31	7	4	1	28	13	181	68
51–60	25	8	11	5	16	3	14	3	1	1	10	2	77	22
>60	3	0	0	0	1	0	0	0	0	0	1	1	5	1
New recruits, %	11.0	9.4	8.7	12.5	6.1	4.0	3.8	4.4	3.1	4.2	12.3	12.2	6.8	6.9

Employees leaving	Finland		Sweden		Russia		Germany		United Kingdom		Other countries		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
age group	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
≤20	2	0	5	2	0	0	0	0	0	0	0	1	7	3
21–30	36	13	54	44	47	6	7	8	3	0	56	38	203	109
31–40	42	12	48	31	89	33	22	19	1	2	50	34	252	131
41–50	25	8	12	33	61	14	21	15	0	1	26	17	145	88
51–60	16	8	21	37	68	26	17	5	14	1	16	16	152	93
>60	34	11	30	18	47	7	13	0	11	0	26	9	161	45
Departure turnover, %	9.8	7.5	13.8	33.8 *	6.0	4.9	2.3	4.1	3.5	2.4	11.4	15.3	6.6	9.4

* Departure turnover was impacted by the transfer of employees to an external company in the customer service business.

Employees leaving, employee's initiative	Finland		Sweden		Russia		Germany		United Kingdom		Other countries		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
age group	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
≤20	1	0	3	1	0	0	0	0	0	0	1	0	5	1
21–30	32	11	24	17	44	6	6	7	2	0	35	24	143	65
31–40	31	9	20	9	84	31	20	18	1	2	24	18	180	87
41–50	14	6	3	6	51	12	16	14	0	1	13	7	97	46
51–60	6	1	8	7	62	24	16	4	12	1	7	4	111	41
>60	30	10	21	8	43	7	12	0	11	0	24	5	141	30
Voluntary departure turnover, %	7.2	5.4	6.4	9.8	5.4	4.6	2.0	3.7	3.1	2.4	6.8	7.7	4.9	5.4

1) Uniper consolidated as of Q2/2020

Diversity and equal opportunity

We understand that diversity and inclusion are key to our long-term success as a company in all our markets. We value diversity and foster fair treatment and equal opportunity in the recruitment, remuneration, development and advancement of employees, regardless of ethnicity, religion, political opinion, gender, age, national origin, language, sexual orientation, marital status, disability, or any other factor. Discrimination or unfair treatment is not tolerated.

Flexible work schedules, remote work and parental leave arrangements support the work-life balance of employees. We offer flexible work schedules and remote working in positions that do not require presence at the workplace. Remote working increased significantly in 2020 due to the Covid-19 pandemic, as Fortum

employees were either required or recommended to work remotely in line with local guidelines set by the authorities. Parental leave is granted as prescribed by law. The exception to this is India, where we offer an additional four weeks leave on top of what is stipulated by the law.

In Finland, Fortum annually drafts company-specific gender equality plans in collaboration with personnel representatives. Using various statistics, the gender equality plans examine the realisation of equality between men and women in the company's Finnish operations.

Additionally, the plans lay out measures to further improve equality, such as promoting minority gender in different job grades, ensuring equal opportunities in training and career development, and correcting unjustified pay gaps between women and men if detected.

In addition, separate equality promotion plans address various forms of equality, such as age, sexual orientation, ethnicity, religion etc.

Equality promotion plans are drafted annually at the corporate level for units operating in Finland. Their purpose is to assess the realisation of equality at the workplace and to develop working conditions and ways of operating to be followed when selecting employees and when making decisions affecting employees.

Uniper implemented a Diversity and Inclusion Improvement Plan for 2018–2020. The purpose of the plan was to raise employees' awareness of diversity and inclusion and to set specific targets

for increasing employee engagement in teams and minimising discrimination. First indications show success in the areas of awareness and engagement. A full review of the plan's success will be conducted in the first half of 2021. Uniper also offers online training modules on diversity, inclusion and unconscious bias for managers and employees and seeks to hire and promote minorities and people with disabilities.

Fortum and Uniper are both participants in the [► Equal by 30](#) campaign, a global effort to reach gender parity in the energy sector by 2030. The initiative includes 12 governments and more than 130 participating organizations worldwide. In 2020, Equal by 30 conducted an employee survey to collect data and develop an international benchmark for diversity and inclusion in the energy sector. The survey collected information on demographics, identity, employee experience, and employee position within their organisation. According to the survey, women of colour, women with a disability, and women struggling with a mental health challenge face the greatest workplace barriers.

Fortum, excluding Uniper, also takes part in the Female Leader Engineer (FLE) programme in Sweden. The programme aims to strengthen the role of women in the corporate world and especially in engineering-dominated sectors where men are in the clear majority. Through the programme, female engineering students compete for internships in industrial companies. The winner of FLE 2020 started her thesis work at Fortum in January 2021.

Uniper participates in several initiatives promoting diversity in various operating countries. The company is a signatory of the German Diversity Charter and is taking part in the "Komm, mach MINT" programme that aims to attract and support women and girls in the area of STEM (science, technology, engineering, and mathematics). In Sweden, Uniper is sponsoring "Kraftkvinnorna Powerwoman of the year" and "Women in Nuclear" as well as participating in BRIP (Induction programme for young females in the energy sector).

In 2020, females accounted for 27% of total personnel and 27% of management. Fortum's target is to comply with the principles issued in the Finnish Government Resolution on equal gender representation in the boards of listed companies with the aim of the board consisting



of at least 40% of women and men each by 2020. At the end of 2020, Fortum's Board of Directors comprised nine members, four (44%) of them were women. In accordance with the German "Law on Equal Participation of Women and Men in Leadership Positions in the Private and Public Sector," Uniper has set a target for women to account for 25% of its high-level executives by June 2022. It intends to achieve this target through measures such as more diverse selection and

recruitment procedures, mentoring and flexible work arrangements for all employees. As of year-end 2020, Uniper had not yet achieved the target; the figure was 21%.

The average age of Fortum employees, excluding Uniper, was 43 years. The average age of Uniper employees was 45 years. The share of employees over 50 years old was 32% for the entire Group.

Personnel

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Supply chain

Fortum is committed to zero tolerance of any form of discrimination and harassment. This is clearly expressed in both Fortum's and Uniper's Codes of Conduct. The Codes of Conduct also include guidelines for employees on how to report possible violations. All compliance concerns are reviewed according to the established internal processes. Fortum's, excluding Uniper, operations in Finland, Sweden, and India, for example, also have separate guidelines in place for workplace harassment and discrimination.

There were no harassment or discrimination incidents reported to Fortum's, excluding Uniper, reporting channels in 2020. In 2019, a former Fortum employee reported to the Regional State Administrative Agency about experienced bullying during the employment. The authorities considered the case unfounded and it was closed in early 2020.

Management by age and gender (GRI 405-1)¹⁾

age group	Male	Female
≤20	0	0
21–30	9	8
31–40	136	59
41–50	207	84
51–60	185	50
>60	22	7

1) Uniper consolidated at year-end 2020

Personnel age distribution by country and gender (GRI 405-1)¹⁾

age group	Finland		Sweden		Russia		Germany		United Kingdom		Other countries		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
≤20	6	2	13	9	8	2	128	16	18	0	5	1	178	30
21–30	246	108	133	91	734	171	491	257	116	21	212	195	1,932	843
31–40	467	221	274	97	1,756	541	774	418	173	60	424	264	3,868	1,601
41–50	396	177	308	148	1,467	646	988	351	245	63	350	175	3,754	1,560
51–60	414	195	395	124	1,271	557	1,430	281	272	32	420	129	4,202	1,318
>60	103	35	134	28	252	74	123	21	43	5	150	27	805	190

1) Uniper consolidated at year-end 2020

Rewarding

Competitive remuneration is essential for attracting and retaining talented people. Salary levels at Fortum are in compliance with established industry practices in each country, local legislation and sector-specific labour market and other agreements. The key objective of rewarding is to encourage and recognise high performance, professional development and behaviour that align with our strategy and values. Employee compensation includes variable components that reflect both the company's financial and sustainability performance as well as the employees' individual performance.

Fortum, excluding Uniper, offers its employees a share savings programme. The purpose of the programme is to encourage employees to become Fortum shareholders and to strengthen their commitment to increasing shareholder value. Participation in the share savings programme is voluntary and is offered to all employees, except in countries where prohibited by local legislation or other similar reasons, such as Russia.

For Fortum, excluding Uniper, the harmonised job classification system enables the evaluation of pay equality for the base salary in all our operating countries. All personnel groups, except individuals working in blue-collar positions (around 28% of total personnel), are included. In 2020, the total number of personnel included in the evaluation was 4,060, of which 1,482 (37%) were female. The base salaries of female employees were, on average, 5% (2019: 5%) lower than the male base salaries. The average number of years of service for female employees was five and for male employees 11.

Uniper publishes annually a gender pay gap report in line with the UK legal requirements for its two legal entities employing around 250 people: Uniper UK Ltd and Uniper Technologies Ltd. The mean pay gap has seen a small improvement in both companies since 2019. However, there was a slight increase in the median pay gap in both companies. The report can be found on [► Uniper's website](#).

Employee-employer relations

Fortum's business operations are developed and strengthened in good collaboration with employees. We believe that the successful management of business is built on relationships of trust between management and employees and on the active flow of information.

Fortum respects employees' freedom of association and the right to collective bargaining. In most of our operating countries, freedom of association and collective bargaining are guaranteed by law. The exceptions to this are India, the United Arab Emirates, and the USA, which have not ratified the International Labour Organisation's (ILO) Convention on the right to freedom of association and collective bargaining. In these countries, we comply with the same practices as in other countries of operation, and we do not limit or prohibit the right to freedom of association.

We apply local collective bargaining agreements in compliance with the scope of each respective agreement in our operating countries. Collective bargaining agreements cover around 75% of Fortum's employees in our main operating countries. There are no applicable collective bargaining agreements in, e.g., Hungary, India, Lithuania, Poland, the United Arab Emirates, and the USA. In these countries, employment contracts are based on local legislation and on the company's human resources policies.

European Works Councils

Fortum's and Uniper's European employees are represented by the companies' European Works Councils. Through the councils, workers are informed and consulted by management on the progress of the business and on any significant decision at the European level that could affect their employment or working conditions.

In 2020, the Fortum European Council (FEC) held a virtual meeting, in which personnel representatives from Finland, Sweden, Norway, Poland, Estonia and Denmark participated. The Council's meeting focused on, among other topics, Fortum's strategy and business outlook, and the impact of the Covid-19 pandemic on Fortum's personnel and our ways of working, especially in terms of occupational safety and personnel

wellbeing. In addition, local level employee-employer meetings are held several times a year in different countries as needed.

Several virtual meetings of the SE Works Council of Uniper SE and of the Executive Committee of the SE Works Council took place in 2020, in which representatives from Germany, the Benelux countries, Sweden, the United Kingdom and Hungary participated. In addition to some cross-border projects and initiatives, the main topics discussed were the corporate and people strategy, the impact of Brexit, the impact of Covid-19 and the future way of working after the pandemic ("New Normal").

Employees are also represented in Uniper's twelve-member Supervisory Board, in which six members are elected by the employees in accordance with the agreement on employee participation laid down in the SE Uniper election procedures.

The dialogue between Fortum's management and Uniper employee representatives was active during 2020. Also the adaptation negotiations to create a common EWC for Fortum and Uniper have been started.

Restructuring situations

In situations of organisational restructuring, we negotiate with personnel representatives in compliance with each country's local legislation and contractual procedures. In situations involving personnel reductions, the minimum notice period is based on local legislation, collective labour agreements or employment contracts, which are in harmony with the local legislation and agreements.

In situations involving personnel reductions, we want to primarily support the reemployment of the personnel. We offer outplacement services on a per case and per country basis, and, in cooperation with local unemployment authorities or service providers, we investigate the possibilities to arrange vocational or other training that enhances employability. The content of the offered support package is decided based on local needs. The financial compensation of the package is usually based on the years of employment.

Employee health and wellbeing

By improving work wellbeing, we support the work environment and a business culture that promotes our employees' health, occupational safety, and the functionality of the work community. In 2020, our efforts focused on safeguarding personnel from the effects of the Covid-19 pandemic and supporting their physical and mental wellbeing in the exceptional conditions.

Covid-19 response

Fortum and Uniper share a similar approach in protecting their employees and operations from the effects of the Covid-19 pandemic. At the beginning of the pandemic, coordination teams consisting of senior management were established in both companies to closely monitor the development of the pandemic and to agree on related actions.

At Fortum, excluding Uniper, the Covid-19 Task Force comprises experts from Corporate Security, Occupational Healthcare, People Function, Corporate Communications, Corporate Risk and Compliance, Public Affairs, Corporate Procurement, and the Business Technology units. The Task Force is led by the Vice President of the Security unit. Fortum Executive Management support is provided by Senior Vice Presidents for Strategy, People and Performance and Corporate Affairs and Communication.

The Task Force supports Fortum's business divisions and support functions by

- Maintaining situational awareness regarding the pandemic
- Following-up on the requirements and recommendations issued by the local authorities in different countries
- Issuing instructions for safe work arrangements at offices and sites, as well as guidance for remote working
- Giving medical updates regarding testing and vaccines
- Communicating best practices and lessons learnt in tackling the pandemic at the workplace



During the year, the Task Force organised five virtual townhall meetings with Q&A sessions for Fortum employees. In addition, 22 Management Letters were sent to all Fortum managers. Information on the pandemic has also been available on the corporate intranet for all employees in six languages.

The practices taken into use at Fortum offices and sites to combat Covid-19 and safeguard the health of personnel include the requirement or recommendation, depending on guidelines given by the local authorities, to work remotely in those positions where a physical presence is not required. At sites where remote work is not possible, we have implemented special precautionary measures, such as arranging staggered arrivals, breaks and lunch hours, maintaining physical distance, encouraging the use of face masks and organising enhanced cleaning. Hand disinfectants, face masks, protective gloves and disinfectant cleaning wipes are provided at Fortum offices and sites.

Travel restrictions have been in place since the beginning of the pandemic, and travelling abroad is only allowed for a mandatory business reason with approval from Fortum Executive Management. The company has also implemented several measures to support employees working remotely; examples include cloud-based IT solutions and HR processes that support flexible, mobile work arrangements.

The above mentioned or similar practices are also implemented in Uniper's operations.

Occupational safety and health care

Occupational safety and health care are organised in our operating countries in line with local legislative requirements. Occupational safety committees or similar bodies represent all personnel groups, and they regularly address issues related to occupational safety and workplace wellbeing.

All our employees are within the sphere of occupational health care. We emphasise the significance of preventive activities in promoting health and wellbeing in the company. We conduct regular medical examinations of our personnel in accordance with local laws. Employees

who in their work are exposed to, e.g., noise, dust, radiation, or who perform shift work, are within the sphere of the examinations.

For Fortum, excluding Uniper, the percentage of sickness-related absences was 2.9 (2019: 2.9). In general, sickness absences decreased due to remote working, except in Russia, where majority of employees work at power plants in operative positions. In Russia, Covid-19 pandemic increased absenteeism. The sickness absence rate is calculated based on the theoretical working hours. Reducing sickness-related absences is a priority for us, and we address the issue with the so-called early-support model. We increase open communication between employees and supervisors by discussing and mapping the reasons for absences. Training is arranged for supervisors in the management of working capacity and work wellbeing.

Wellbeing programmes and surveys

Fortum, excluding Uniper, runs the Energise Your Day Wellbeing programme, which encourages employees to maintain their wellbeing and take care of themselves. The programme offers ideas and tools for self-management, stress management, recovery, nutrition and physical activity.

The focus areas of the programme are defined based on the employee wellbeing surveys and other wellbeing KPIs. The focus areas in 2020 were mental energy, including, e.g., recovery and stress management, activity during the workday and managing sickness absences. During the year, we launched large-scale cooperation with a wellbeing service provider, which includes individual and team-level wellbeing coaching and other wellbeing services that are available to employees on a weekly basis.

Due to the Covid-19 pandemic, the focus was on organising and developing virtual events and services. A new concept implemented within the virtual break exercise programme focused especially on remote working. We also organised a total of 18 wellbeing and Covid-19 related webinars, three virtual Wellness Wednesday events and a Stronger Together wellbeing campaign. Remote reception of an occupational physiotherapist was available for teams and individuals. In addition, a package including health and wellbeing products was sent to all Fortum employees.

Fortum, excluding Uniper, conducts an annual Wellbeing Pulse Survey. Based on the feedback, despite the exceptional year, wellbeing was at a good level. 84% of respondents felt that they are well supported and informed by the employer. According to the personnel, wellbeing can be further improved by, e.g., focusing more on increasing personal energy levels after the workday. According to the survey, 29% of respondents agreed that they don't have enough energy left after the workday to do personal activities. In 2021, we will continue to pay attention to the holistic wellbeing and resilience of our employees.

Uniper's integrated health approach offers all employees access to a wide range of services, from medical check-ups and extensive exercise programmes to mental wellbeing campaigns. Health management continued to make progress in 2020. Functional teams continued to implement actions defined in their unit's health action plans. The 2020 Voice of Uniper employee survey indicated increased satisfaction with Uniper's health support. The average score on the health-related questions increased from 86% positive in 2019 to 89% in 2020. Results also indicated that employees felt that Uniper's response to the Covid-19 situation was exemplary.

Employee development

Our goal is to be a forerunner in the future energy system. This means that we must continuously invest in the development of leadership and personnel competence and in the support of an open and flexible corporate culture.

In 2020, special emphasis was put on supporting the managers and teams in remote and virtual working. Fortum, excluding Uniper, launched Workforce 2.0, a new strategic initiative, to analyse what structural long-term changes we need to implement in our ways of working. A handbook "How to Lead a Virtual Team" was published to give managers and employees practical tips for leadership, communication and interaction when the teams are not meeting face to face.

At Uniper, a new Leadership Development Framework for managers was implemented; it includes a programme designed to address leadership topics that are essential for new leaders to succeed. Deep

dive modules for experienced leaders on topics like inclusive, agile and remote leadership are also now part of the Leadership curriculum at Uniper and accessible to all managers.

The digital learning offering was reinforced to offer employees a wide range of possibilities for capacity building also when working remotely. Fortum, excluding Uniper, continued to arrange virtual Fortum Talks events addressing strategically important topics relevant for the future success of the company. Uniper introduced cooperation with LinkedIn Learning. The arrangement enables all of the company's employees in Germany to use an online platform to book outside training quickly and easily. Uniper also initiated a programme to improve employees' digital capabilities. The programme will be expanded in 2021 and made available Group-wide.

We offer our personnel a variety of online training modules. Fortum, excluding Uniper, has in place five online trainings that are mandatory for all employees. These trainings are related to the Code of Conduct, occupational safety, corporate security and privacy. Uniper has three mandatory online trainings which address compliance, data protection and IT security.

For Fortum, excluding Uniper, training costs in 2020 totalled EUR 3.8 million.

Performance and development discussions

We support employee development through performance management. For Fortum, excluding Uniper, all employees are within the scope of performance and development discussions. The main target of the discussion is to ensure that the employee has clear targets that align with the business as well as the competencies supporting the achievement of the targets and professional growth. The achievement of the targets forms the basis for payment of short-term incentive (STI). All permanent employees who have a minimum of three months of employment in Fortum, excluding Uniper, are within the scope of Fortum's incentive scheme.

Performance management is an integral part of the Uniper culture and sets out the direction based on the strategy, ensuring that everyone strives towards clearly defined annual objectives. Uniper has in place

several targeted variable STI programmes to support the company's annual success. The programmes vary between personnel groups and legal entities; in general, however, they are based on both companies' financial performance as well as individual performance and behaviour.

Feedback from personnel

We place a significant emphasis on an open and trusting corporate culture, and we highly value our employees' feedback. Fortum, excluding Uniper, uses a real-time and flexible feedback pulse tool to keep track of the level of employee engagement and wellbeing in the company. The global engagement survey is conducted twice a year. In addition, it is possible for the managers to run surveys with a couple of questions whenever necessary. The tool allows managers and employees to see the results as soon as the feedback is given.

For Fortum, excluding Uniper, the response rate of the global engagement survey carried out in November 2020 was a record high of 76% (2019: 67%). The Total Engagement Index reached 71 (2019: 68), and the results improved or stayed the same in nine out of ten areas. Compared to the previous year's results, the biggest improvement was seen in decreasing the hierarchy in decision-making and in empowerment to achieve personal objectives. 83% of employees are proud to work at Fortum and consider Fortum to be an innovative company. These two areas scored the highest in the survey. A slight decrease was seen in trusting the decisions of management. The area that scored the lowest (54%) is collaboration between the divisions and units. We will continue measures to promote and strengthen collaboration across the organisation.

The Voice of Uniper, an annual employee survey, excluding Unipro, measures employees' awareness of the Uniper Way and how it is brought to life by managers and teams. The participation rate in the 2020 survey was the highest ever at 66%. The results indicated improvement in nearly all categories. Employees' responses showed that their support for Uniper's commitment to accelerating the transition to a low-carbon future is strong and that their understanding of Uniper's strategy and objectives has become much clearer.

The survey results related to employee wellbeing are discussed in the section ▶ **Wellbeing programmes and surveys**.

Safety and security

For Fortum, excellence in safety is the foundation of our business, and safe performance is a sign of professionalism. We strive to be a safe workplace for our employees and for the contractors and service providers who work for us.

Occupational and operational safety

Maintaining high health and safety practices is essential for Fortum. We believe that all work injuries and EHS non-compliances are preventable when competence and the right attitude prevails, when potential risks are addressed, and when measures are taken to safeguard against them. Our commitment to safety also extends to people who live near our facilities.

Occupational safety management

Safety is developed systematically in all our operations. For Fortum, excluding Uniper, the Sustainability Policy, the Minimum Requirements for EHS Management, and more detailed EHS manuals steer the work. We regularly update the requirements, and we assess the divisions' performance in complying with the revised requirements. Safety development plans are made as part of the annual business planning and they are based on the principle of continuous improvement.

For Uniper, the most important tools guiding safety efforts are the HSSE & Sustainability Policy Statement and the HSSE and Sustainability Improvement Plan. Based on the improvement plan, the operating entities design their own annual improvement plans, which include health and safety targets and improvement measures.

A certified OHSAS 18001 or ISO 45001 safety management system covers 98.8% of Fortum's power and heat production worldwide. Internal audits and external audits by independent auditors are regularly conducted at our power plants to improve operations.

Occupational safety targets

At the end of 2019, Group safety targets for the year 2020 were defined for Fortum, excluding Uniper. However, as Fortum started to consolidate Uniper as a subsidiary as of 31 March 2020, this materially changed the extent of the operations and performance figures of Fortum Group. Therefore, Fortum only reports safety performance in this report with selected key indicators presented in the text and tables without comparing performance against the previously set targets for 2020, which are no longer relevant for the altered Group.

The Group's new safety target is measured as Total Recordable Injury Frequency (TRIF), for own personnel and contractors, and our ambitious goal is to be below 1.0 by the end of 2025. Fortum's Total Recordable Injury Frequency (TRIF) was 2.3 in 2020.

The realisation of safety targets is a part of Fortum's, excluding Uniper, [incentive plans](#).

Safety performance

In 2020, Fortum's Lost Time Injury Frequency (LTIF) for own personnel and contractors was 1.3. Fortum . Safety performance In 2020, Fortum's Lost Time Injury Frequency (LTIF) for own personnel and contractors was 1.3. Fortum strives for zero severe occupational accidents. In 2020, there was one severe occupational accident in the operations. In September 2020, an employee of Uniper was fatally injured by an electrical shock while working on a switchgear upgrade project at a customer's premises in Germany. A comprehensive investigation was conducted to determine the incident's circumstances and root causes. Specific actions resulting from the investigation are in the process of being implemented.

Fortum, excluding Uniper, applies three internal control points covering its EHS processes. These include the quality of the investigation process of occupational accidents, major EHS incidents, and serious near misses; the GAP index; and the Contractor Safety Improvement index, all measured on a scale of 1–5, with five indicating the highest maturity level.

In 2020, the quality of the investigation process of occupational accidents, major EHS incidents, and serious near misses was at the very good level of 4.0.

In 2020, the GAP index was at the desired level of 3.0. The GAP index measures how well Fortum's, excluding Uniper, EHS minimum requirements are realised at the power plant level.

The Contractor Safety Improvement index was at the very good level of 4.0 in 2020. The Contractor Safety Improvement index measures how well Fortum, excluding Uniper, has managed to implement measures targeting improvements in contractor safety.

Occupational safety risk assessment and incident investigation

Occupational risk management includes all levels, from strategic risks and business planning to daily work. A risk management plan is drafted on the basis of a risk assessment. Assessments and plans are made together with those working at the worksites, and they are updated at agreed intervals and when conditions change.

At Fortum, e.g. work in confined spaces, working at heights, and heavy lifting work, as well as the handling of hazardous chemicals have been classified as high-risk work. Requirements related to, e.g., personnel training and experience, the provision of instructions, and the pre-job verification to be performed have been defined for performing high-risk work.

The risk management process is developed based on continuous improvement principles and takes into consideration learnings and findings from incidents and deviations at Fortum and other companies. During incident investigations it is concluded whether the risk assessments are correct and the preventive actions sufficient.

For Fortum, excluding Uniper, incidents and the findings of investigations are documented in the incident management system FRIDA. The learnings are shared with the organisations through digital safety bulletins. The quality of conducted investigations is verified by the divisions with quarterly process maturity assessments.

Uniper has in place the incident management system Synergi Life to systematically document and analyse incidents and near misses and to ensure effective communications and corrective measures to prevent their recurrence.

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Key safety figures in 2018–2020 (GRI 403-9)¹⁾

	2020	2019	2018
Lost time injury frequency (LTIF) ²⁾ , own personnel and contractors	1.3	1.7	1.8
Lost time injury frequency (LTIF) ²⁾ , own personnel	0.7	0.8	0.2
Lost time injury frequency (LTIF) ²⁾ , contractors	2.2	3.3	4.8
Lost time injuries, own personnel	20	11	3
Lost time injuries, contractors	43	28	39
Severe ³⁾ occupational accidents of which fatalities, own personnel	1	1	4
of which fatalities, contractors	1	0	0
Major EHS Incidents ⁴⁾	0	0	2
	16	11 *	18 *

1) Uniper consolidated as of Q2/2020

2) LTIF = Lost Time Injury Frequency, injuries per million working hours

3) Fatality or an accident leading to permanent disability or an accident that could have caused serious consequences

4) Excluding Uniper. Includes major fires, leaks, explosions, dam safety incidents, environmental non-compliances, and INES events level ≥ 1. INES = International Nuclear Event Scale

* The figure does not include the exceedances caused by possible changes in permit limits in Russia

Occupational accidents, accident frequency, and absence days due to occupational accidents in 2020 by country (GRI 403-9)¹⁾

	Finland	Sweden	Russia	Germany	United Kingdom	Other countries
Own personnel						
Occupational accidents causing absence	6	4	2	4	0	4
LTIF	1.4	1.4	0.2	0.6	0.0	1.0
Absence from work due to occupational accidents ²⁾ , days	29	42	169	192 *	0	24
Contractors						
Occupational accidents causing absence	13	13	0	4	2	10
LTIF	6.0	6.1	0.0	1.3	1.5	3.9
Absence from work due to occupational accidents ²⁾ , days	257	91	0	52	4	187

1) Uniper consolidated as of Q2/2020

2) Absence days caused by accidents that have occurred in Q1 not included for Uniper

* Fatal accident calculated as 180 absence days according to Fortum's internal instructions

Training and development projects related to occupational safety

In 2020, Fortum, excluding Uniper, launched new mandatory online training addressing the most important safety requirements expressed in the updated Safety and Security Handbook. In addition, online courses were offered in chemical safety and the use of safety walks to support the safety culture.

Uniper provides safety leadership training to all newly hired senior managers and to current senior managers as a periodic refresher. In 2020, Uniper launched a project to transform itself into a learning organisation. Its aim is to foster the sharing of information and best practices between different functions in order to promote mutual learning.

New tools were implemented during the year to improve occupational safety in pandemic conditions. Fortum, excluding Uniper, created a concept for virtual safety walks to replace physical visits at the sites, the goal being to reinforce positive safety behaviour and raise safety awareness. More than 200 managers participated in training on how to conduct a virtual safety walk utilising a smartphone. In addition, guidelines for safe remote working were issued, including tips on how to ensure fire safety at home as well as paying attention to ergonomics.

Fortum's City Solutions division launched a safety campaign, "Golden Safety Rules" introducing six crucial safety actions. The purpose of the campaign is to raise common safety awareness and to keep safety on everyone's agenda continuously. The target is to have a long-lasting impact on the safety culture and achieve the target of zero serious injuries.

Uniper launched "Beyond Zero", a new HSSE and Sustainability 2025 vision for Uniper's asset operations. The initiative encompasses people (their health, safety, and lifelong learning), assets, (their health, security, and integrity) and focus on the sustainable future of energy, in partnership with customers and communities. The idea is to go beyond zero harm – the motto of Uniper's previous safety vision – to focus also on adding value for our employees, assets, and planet. Beyond Zero is the umbrella for a variety of initiatives to foster continual and innovative

improvement at asset operations, but also seeks to collaborate with other projects across Uniper that accord with its vision.

Measures were also taken to improve contractor safety. Fortum, excluding Uniper, introduced the concept of Safety Cards; these green, yellow and red cards are given to own and contractor employees to recognise exemplary safety behaviour, to point out that improvement and further coaching is needed, or to highlight unacceptable behaviour that results in a temporary or permanent dismissal from the site. In addition, we developed a mobile application that includes both Fortum-level and site-specific standard operating procedures and clear instructions with pictures on how to work safely in different situations. The idea is to create a mobile library of safety cards that is available both to Fortum employees and contractors.

Fortum's aspiration to make the working environment safe for all was acknowledged in Latvia where we received The Golden Helmet 2020 award from Latvia Labour Safety Inspection. The focus for 2020 was on digital solutions implemented in companies to help to maintain a safe work environment. Fortum's FRIDA system was recognised as a best practice example.

Occupational hygiene

In recent years, Fortum has expanded its business in the recycling and waste management sectors. This has subjected our operating environment to new kinds of exposure agents, like chemicals that are processed in hazardous waste treatment plants, and microbes related to the handling of mixed waste, which may cause adverse effects for employees. For us to work safely and to not cause harm to health, safety or the environment, we must be aware of the risks related to exposure agents and follow the best practices.

Occupational hygiene risk assessments are done at the site level as a part of workplace's risk assessments. Occupational hygiene measurements are conducted, if the risks cannot be evaluated otherwise. Regular health surveillance checks are conducted for personnel whose work could expose them to noise or chemicals, e.g. At Fortum, excluding Uniper, the corporate occupational hygienist is



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responsible for coordinating the work in cooperation with occupational health care. For Uniper, health managers in core countries also cover occupational hygiene-related topics.

For Fortum, excluding Uniper, the occupational hygiene work in 2020 focused particularly on supporting Fortum's Recycling and Waste business area, especially the recently acquired metal recycling operations. In 2021, Fortum will be participating in two research studies on Occupational Hygiene in the circular economy. The studies are led by the Finnish Institute of Occupational Health. "Hakita" will study occupational-based exposure widely in the circular economy. "Safera" will concentrate on occupational exposure and best practices in the Li-battery life cycle. The study is relevant for Fortum's battery recycling operations, which will continue to expand in 2021.

Operational safety

In the exceptional conditions caused by the Covid-19 pandemic, Fortum's top priority was to maintain business continuity. This goal was well achieved; there were no pandemic-related interruptions in Fortum's energy production or challenges in maintaining operational safety. Maintenance outages were, in general, also implemented as scheduled with careful planning and special measures to protect the health of own and contractors' employees. In some cases, the duration of maintenance periods was extended to reduce the number of workers on site at the same time.

Major EHS incidents are monitored, reported and investigated regularly in Fortum's operations, and corrective actions are implemented as required. In 2020, there were 16 major EHS incidents in Fortum's operations, excluding Uniper. The major EHS incidents are reported in more detail in the [► Environmental non-compliances](#) section.

Dam safety

Fortum is systematically reducing risks related to dam safety. A long-term programme is in place for improving the surveillance of the

condition of dams and for securing the discharge capacity in extreme flood situations.

In 2020, Fortum, excluding Uniper, focused on operational issues, such as supporting the smooth transition of an outsourcing partner in Sweden, and managing the impacts of Covid-19 with respect to emergency preparedness. Planned development actions included improving risk awareness and organising dam safety trainings for own personnel and the outsourcing partner. However, some of these planned actions were postponed due to the Covid-19 situation. During the year, we actively participated in the updating of Sweden's dam safety guidelines (RIDAS).

In 2020, the preparation and implementation of dam safety investments proceeded as planned. Our extensive dam safety project at the Trängslet dam in the [► Dalälven water system](#) in Sweden is progressing as scheduled. Another larger dam safety project is underway at Tainionkoski dam in Finland. For 2021, we are planning to start [► large-scale projects](#) for the Forshuvud, Untra and Dejefors dams in Sweden.

The most significant of our dam safety projects in the preliminary planning phase focus on the following dams in Sweden; Letten in the [► Klarälven water system](#), Lanforsen in the Dalälven water system, Ljsnefors in the Ljusnan water system, and Åtorp in the Gullspång water system. The construction work on these will commence in 2022 or 2023. The most important goals of the projects are to bring the safety of the dams up to a good level by increasing discharge capacity and by refurbishing structures, and to extend the useful life of the dams.

Fortum had no significant operative challenges related to dam safety in 2020, despite the Covid-19 pandemic.

Nuclear safety

The most important task of our nuclear power operations is to produce electricity safely, reliably and competitively, in the short and long term, while complying with the principles of nuclear and radiation safety, waste management safety, and nuclear material control. Our operations

are based on a high-level safety culture and quality and on continuous improvement. Our own world-class expertise is a prerequisite for safety and competitiveness.

In spring 2020, Fortum submitted to the Finnish Radiation and Nuclear Safety Authority a periodic safety assessment that extensively assesses the safety and compliance of the Loviisa nuclear power plant and its related operations. The plant and its operations are fully compliant with the authority regulations, and the plant's safety is on a good level.

The annual dose limit for radiation worker shall not exceed 20 mSv per year. However, in practice, the annual limit at Loviisa power plant is 13 mSv. Long-term, methodical work to lower radiation levels for radiation workers has produced results at both plant units, and the radiation levels have decreased by 50 per cent in five years. This has been possible through, for example, the choice of materials (e.g. antimony and cobalt-free materials), implementation of a new primary water purification system's filtering during outages, foreign material exclusion and trainings. This is a good indication of our personnel's competence and commitment to the continuous improvement of safety.

Several plant modifications were implemented at Loviisa nuclear power plant in 2020 to improve the safety and operation of the plant. For example, pressure tests of the primary and secondary circuit pressurised equipment and pipes, and leak testing of the containment were performed. These ensure the safe use of the pressurised equipment and piping for the next operating period.

The automation renewal of Loviisa 1's first emergency generator was completed in 2020. The project will continue in 2021 with modifications to the next emergency generator. The purpose of the project is to ensure the availability of back-up power in case of loss of offsite electricity.

In the plant protection renewal project, preliminary installations were done in the 2020 annual outage. The actual commissioning for both Loviisa units will be during the 2021 outage. The purpose of the project is to secure the safety and the operation of Loviisa NPP by replacing the old system with a new one.

Uniper operates Oskarshamn nuclear power plant (OKG) in Sweden. Nuclear safety has the highest priority in OKG's operations.

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There is more about OKG's nuclear safety policy and safety culture on the [OKG website](#).

Successful annual outage in pandemic conditions

To ensure a successful annual outage, a multitude of special arrangements were made at the Loviisa nuclear power plant to prevent Covid-19 infections. In addition to the 500 power plant employees who participated in the annual outage, there were also nearly a thousand external workers. Some 25 per cent of these workers came from outside Finland.

Covid-19-related contingencies and measures were implemented through work procedures, and space and working hour arrangements so that work tasks could be performed safely and with a high level of quality. Concrete examples of measures taken include paying special attention to quarantine practices, extensive testing, and mandatory use of face masks. Communicating the instructions repeatedly in multiple channels and the managers' role in ensuring that expectations were met were crucial for a successful outcome. Thanks to comprehensive contingency measures and the personnel's strong commitment, the annual outages were implemented safely in the planned scope and with no coronavirus cases.

Corporate security

Corporate security processes ensure the uninterrupted continuity of business and the safety of people, information, our assets, and processes in normal and exceptional situations. Uninterrupted energy production and distribution is important – both for Fortum's business operations and for an energy-dependent society.

Securing personnel and business

Compliance with the minimum security requirements improves our operational ability to withstand and recover from disruptions and thus improves productivity. Risks impacting the company and business operations may be directly or indirectly related to political situations, terrorism, crime, conflicts and business partners. Security is also

improved by gaining a deeper understanding of the security situation, which is provided to support business decision making. Fortum assesses risks related to people, business, and information in all operating countries and in countries where we have potential operations or business travel.

Cyber security

Fortum, excluding Uniper, has in place a cyber security programme to ensure the security of the information we handle and the security of our IT and Operation Technology (OT) systems. The aim is to ensure the production and distribution of power and heat and the functioning of digital services offered to customers. We also aim to secure partner-related risks to the extent that they relate to the company's assets. The cyber security programme also includes securing the confidentiality, integrity and availability of the information we handle.

Uniper has implemented a Cyber Defense Center to protect not only the Operational Technology area, but also Uniper's Sales and Trading Business and the standard office environment. Uniper also focuses on the management of personal data to avoid any breach of Data Protection relevant processes. Processes related to personal data have been documented in the data protection management tool based on a best practice approach.

Fortum actively engages in collaboration with authorities and other stakeholders to identify and prevent increasing and evolving cyber threats. The cyber security awareness of employees is improved through training and instructions.

Customer data protection is discussed in the [Product responsibility](#) section.

Contingency planning

Political uncertainty and climate change, as well as the growing dependence on partners may cause disruptions to Fortum Group's operations. For this reason, we have invested in preparing for disaster and emergency situations. Due to the Covid-19 pandemic, we

concentrated heavily on ensuring remote connections and operations as well as substitute locations for critical functions in 2020.

For Fortum, excluding Uniper, crisis and emergency management instructions are prepared for Group, division and site levels. Crisis management and crisis communication instructions have been prepared for, e.g., power and heat outages, for the Loviisa nuclear power plant, and for hydro power production.

In 2020, the annual emergency preparedness exercise related to a nuclear power accident was held at the Loviisa power plant. Part of the rehearsal involved also testing remote connections, operations and communication capabilities. Additionally, several business-specific exercises were held during the year.

Uniper has set up appropriate crisis-prevention measures, and emergency plans have been created that also take into account environmental risks. In addition, there is an effective business continuity management system in place for cases where people or process risks arise.

Regulatory compliance

In recent years, safety- and security-related regulations have increased, and Fortum has initiated supplementary measures required by these regulations. For dam and nuclear safety, emergency preparedness obligations in Finland, Sweden and Germany are based on regulatory provisions; likewise, there are terrorism-related preparedness obligations in many of our operating countries. Regarding other areas, Fortum independently defines, based on its own risk assessments, the crisis and non-compliance situations for which it prepares action plans.

Annual outage at Loviisa NPP involving nearly 1,500 employees completed with zero Covid-19 cases

Human rights

Fortum follows and respects internationally recognised human rights that are included in key human rights treaties. Our operations have a direct or indirect impact on the realisation of the human rights of our own personnel, those working in the supply chain, and members of local communities.

Respect for human rights is expressed in both Fortum's and Uniper's Codes of Conduct and Supplier Codes of Conduct. The UN Guiding Principles on Business and Human Rights are taken into account in our own operations and in supply chain management. Other external initiatives, commitments and guidelines, as well as internal policies and instructions relevant for managing human rights are listed in the section [► Policies and commitments](#). Fortum is committed to identifying, mitigating and monitoring any human rights-related risks in its business operations and its sphere of influence.

Management of human rights issues and personnel training

Fortum Executive Management decides on the sustainability approach, including human rights, and Group-level sustainability targets that guide annual planning. Fortum's line management is responsible for the implementation of Fortum Group's policies and instructions and for day-to-day sustainability management and improvement plans. Fortum's Corporate Sustainability unit is responsible for conducting human rights impact assessments and supplier audits, as well as Group-level coordination and development of other human rights issues. Fortum's subsidiary Uniper remains a separate company, listed in Germany, and has its own sustainability governance and processes.

The online training on Fortum's Code of Conduct covers human rights-related issues. The online training is part of the induction programme for new employees. The online training is continuously available to all employees, and the entire personnel undertakes mandatory training in conjunction with Code of Conduct updates.

The Supplier Code of Conduct includes human rights requirements for suppliers, and they are addressed as part of the Supplier Code of Conduct training.

Fortum's Code of Conduct and Supplier Code of Conduct were updated during 2020 and published in early 2021. Training on the updated Codes will be organised during 2021. Uniper's updated Code of Conduct was released in early 2020. Uniper seeks to make all compliance and Code of Conduct trainings mandatory to all employees starting in 2021.

Assessment of human rights impacts and mitigation measures

For Fortum, excluding Uniper, a human rights impact assessment is part of investment project planning, especially in new operating countries. It is also part of a country and counterparty risk assessment. Depending on the project, we either assess risks based on public sources or we conduct a more in-depth assessment. The public information sources considered in country risk assessments include the ILO conventions and their ratification, Transparency International's Corruption Perceptions Index, the UN Human Development Index, and human rights reports issued by human rights organisations and states. An assessment based on public sources is always completed for all new countries to which one of our business units is planning to sell products or services. In 2020, we performed five such assessments. For investment projects targeting risk countries, we perform an in-depth assessment in which we often also use external local experts. No in-depth assessments were carried out in 2020.

Fortum, excluding Uniper, defines measures for projects to manage human rights risks in order to comply with our own policies and requirements and, e.g., with lender requirements. Examples of measures include attaching specific contract clauses in joint venture agreements or purchasing contracts, paying special attention to Code of Conduct implementation and safety training of personnel and contractors, and consultations with local communities. We also aim to support favourable impacts in collaboration with local communities and other

stakeholders. In India, for example, we have implemented community projects, which are described in the section [► Corporate citizenship](#).

On an annual basis, Uniper performs a worldwide assessment, which is based on a combination of economic and social indexes, to map key potential country-specific issues, such as working conditions, violation of political rights and civil liberties, as well as security threats, that may directly affect Uniper. The assessment's findings resulted in the implementation of modified due diligence requirements and mitigation measures, such as the inclusion of specific contract clauses, particularly when negotiating with new counterparties operating in medium- or high-risk countries.

Identified impacts on human rights and corrective measures

All forms of child and forced labour are strictly prohibited and in violation of Fortum's and Uniper's Codes of Conduct and Supplier Codes of Conduct. We have not identified risks related to the use of child or forced labour in our own operations. Other human rights aspects and practices relevant for our own operations are discussed in more detail in the other sections of this report. Support for employees' right to freedom of association and collective bargaining are discussed in the section [► Employee-employer relations](#) and the equal treatment of personnel in the section [► Diversity and equal opportunity](#). Occupational safety is addressed in the section [► Safety and Security](#).

Fortum's supplier qualification process and supplier audits cover the most important human rights aspects related to purchases. The human rights impacts of the coal supply chain are addressed in the Bettercoal assessments. These practices are described in more detail in the section [► Sustainable supply chain](#).

Human rights-related grievances and stakeholder discussions

Internal and external reporting channels are offered for reporting any suspected misconduct relating to labour conditions or human rights violations. The channels are described in Fortum's and Uniper's Codes of Conduct and accessible on the companies' internal and external webpages. In 2020, there were no grievances related to human rights filed through Fortum's, excluding Uniper, formal grievance channels, nor were there any grievances carried over from the previous year. During the year, one grievance related to workplace bullying, filed in 2019, was closed as unfounded; see the section ▶ [Diversity and equal opportunity](#).

Both Fortum and Uniper continued discussions with non-governmental organisations (NGOs) about, among other things, human rights issues in the coal supply chain. Several, mainly virtual, meetings were organised with NGO representatives, and both companies also responded directly to specific questions raised by the organisations regarding coal purchases from Russia and Colombia, as well as regarding Fortum's and Uniper's due diligence processes with respect to ▶ [coal supply chains](#).

Modern Slavery Statements

Fortum's, excluding Uniper, subsidiaries operating in the UK annually publish a statement required by the Modern Slavery Act. The statement is available on Fortum's ▶ [website](#). Respectively, the Modern Slavery Statement of Uniper's UK subsidiaries can be found on Uniper's ▶ [website](#). The statements set out the steps that the companies have taken to ensure that slavery and human trafficking are not taking place in any of their supply chains or in any part of their own business.



Stakeholders

Our way of operating responsibly includes open dialogue with our stakeholders and continuously identifying their views and needs. Good collaboration and transparency are the key ways to promote trust and mutual understanding. Our efforts to mitigate climate change benefit all our stakeholders. Payment of taxes, employee wages and dividends, as well as investments and procurements from suppliers of goods and services are our concrete ways to distribute added value to our various stakeholders.

Stakeholder collaboration

Collaboration with different stakeholder groups helps Fortum to assess and meet the expectations that stakeholder groups have towards the company. We have an open and regular dialogue with our different stakeholders. We also conduct annual stakeholder surveys to systematically monitor our stakeholders' views of us. We follow and assess the public dialogue in the countries where we operate, and we have increased the dialogue with our stakeholders also through social media channels. Feedback from customers drives the development of our products and services. Additionally, our membership in national and international organisations helps to deepen our understanding of global sustainability issues and their connections to our business.

Management of stakeholder collaboration at Fortum, excluding Uniper, is assigned particularly to communications, public affairs, corporate sustainability, the functions responsible for electricity and heat sales and energy production, as well as many of our experts. Responsibilities for managing stakeholder collaboration are primarily determined by stakeholder group or interaction themes. Key interaction areas, e.g., public affairs, and corporate communications, have annual plans that guide the activities. At Uniper, a Stakeholder Management Policy stipulates how the company interacts with its stakeholders. It defines the company's objectives for internal and external communications and assigns roles and responsibilities.

Fortum's¹⁾ stakeholder surveys

Survey	Target groups	Target countries	Frequency
One Fortum Survey	Customers General public Public administration Capital markets Non-governmental organisations Opinion leaders Personnel Media	Finland, Sweden, Norway, Poland, Germany, Baltic countries, Russia, India	Customer satisfaction is measured semi-annually
Media tracking	Media	All operating countries	Daily
Brand tracking	General public and customers	Finland, Sweden, Norway, Poland, Germany, Baltic countries	Continuously in Finland, Sweden and Norway, annually in other countries
Pulse survey Stakeholder survey as part of the sustainability materiality analysis	Own personnel Customers Public administration Capital markets Non-governmental organisations Opinion leaders Research facilities and industry associations Personnel	All operating countries Finland, Sweden, Norway, Denmark, Poland, Baltic countries, Russia, India	Monthly Latest in 2019, again when needed

1) Excluding Uniper

Fortum, excluding Uniper, has an informal Advisory Council consisting of representatives of Fortum's key stakeholder groups as invited by the Board of Directors. The Advisory Council aims to increase the dialogue and the exchange of views between the company and its stakeholders. Uniper has, since 2017, periodically invited relevant NGOs to attend a Uniper Sustainability Roundtable, a forum for NGOs and representatives of relevant Uniper departments to discuss and share opinions in order to establish a transparent dialogue.

Fortum's and Uniper's engagement with Bettercoal and stakeholder cooperation in the coal supply chain is discussed separately in the section ▶ **Supply Chain**.

Information through surveys

In collaboration with third parties, Fortum, excluding Uniper, annually conducts surveys regarding stakeholders' expectations towards us and opinions about us. The aim of these surveys is to help Fortum assess and respond to the important stakeholder groups' expectations. The surveys also measure the success of our stakeholder collaboration. Additionally, the surveys provide information about emerging sustainability trends and risks we should acknowledge. We use the survey results in business planning and development and in identifying priorities for sustainability.

Fortum, excluding Uniper, uses the extensive One Fortum Survey to annually measure the company reputation as well as customer satisfaction and its development at different business units. The survey is conducted yearly in spring in most countries where Fortum has operations. The survey results, in terms of customer satisfaction, are presented in the section ▶ **Customers**.

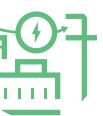
Uniper conducts an annual employee survey called Voice of Uniper, excluding Unipro. It measures employees' awareness of the Uniper Way, i.e. corporate culture, and how it is brought to life by managers and teams.

Our stakeholders



Most important expectations stakeholders have towards Fortum, and our actions in response in 2020

	Stakeholder expectations	Our actions in 2020
 Lenders and shareholders	<ul style="list-style-type: none"> • Long-term value creation • High-yield share • Responsible operations 	<ul style="list-style-type: none"> • Aligned with the goals of the Paris Agreement, our updated strategy targets carbon neutrality by 2050 at the latest with ambitious mid-term targets. • We set new, long-term financial targets: Financial net debt/comparable EBITDA below 2x and climate-dependent hurdle rates for new investments. • We aim for an increased dividend of EUR 1.12 per share for the year 2020 with the target to further increase the dividend going forward. • Our responsibility for climate, resources, personnel, and society plays a key role in our business.
 Customers	<ul style="list-style-type: none"> • High price value of products and services • Understanding customer needs • Offering useful additional services • High personnel expertise 	<ul style="list-style-type: none"> • Develop Sales and Commercialisation Excellence is one of Fortum's, excluding Uniper, four Must-Win Battles for 2019–2021. More than 80 people across Fortum have participated in the project aiming at, e.g., establishing customer management practices, developing sales processes, and increasing customer centricity. • Fortum, excluding Uniper, interviewed over 9,200 customers in the yearly One Fortum Survey.
 Personnel	<ul style="list-style-type: none"> • Occupational safety and work wellbeing • Equal treatment and open interaction • Securing retention and incentivising compensation • Opportunities for professional development 	<ul style="list-style-type: none"> • Fortum Talks events were held to share information about current business topics for personnel. • Fortum and Uniper established cooperation stream Safety and Environment in order to share best practices between the companies. Four initiatives were identified: contractors safety and environment management, learning from incidents and good practices, virtual safety walks, and reporting practices and KPIs. • The first savings period of Fortum, excluding Uniper, forShares Employee Share Savings programme was implemented. • Fortum, excluding Uniper, offered new online training modules for personnel and transformed many existing trainings virtual; started to deliver virtual wellbeing services to personnel supporting especially mental wellbeing and ergonomics during remote work; and continued the Navigator training programme targeting future talent. • Uniper launched cooperation with LinkedIn Learning, allowing all employees in Germany to book external trainings through a new external training booking platform. Uniper also initiated a programme to improve employees' digital capabilities. • Fortum, excluding Uniper, launched a project called The Workforce 2.0, a new strategic initiative, to analyse what structural long-term changes we need to implement in our ways of working. • Uniper launched a project called ► NewNormal, triggered by the shift to home-office work due to Covid-19 restrictions, engaging employees from different parts of the company to design the workplace of the future.
 Future talent	<ul style="list-style-type: none"> • Attractive employer brand • Interesting career opportunities and diverse job responsibilities • Competitive compensation for work • Company values and operating culture • Business ethics and responsibility 	<ul style="list-style-type: none"> • Clean energy and the promotion of a CO₂-free energy system are increasingly on the agenda when we recruit new workforce. • Fortum initiated a Workforce 2.0 project to analyse and gather insights on the structured and long-term changes that need to be implemented, also touching upon our internal and external employer brand. Fortum also participated in website content development clinics to continuously improve content on the external career web pages. • Fortum developed its external storytelling by publishing ► video stories of our employees online. Similarly, Uniper launched a new career website and job board featuring "Evolutionaries", a series of brief videos of Uniper employees telling their stories and giving potential candidates insights into working at Uniper. • In Finland, Fortum organised a large summer job event in collaboration with TietoEVRY and Microsoft. We also had a summer job campaign on social media to create positive visibility and raise interest among job seekers. • In Sweden, Fortum, excluding Uniper, participated in the Female Leader Engineer programme aiming for gender equality in engineer-intensive sectors. • In the 2020 Most Attractive Employers in Finland survey, conducted by the research company Universum, Fortum was listed within the top 10 companies among engineering sector professionals and students. In Germany, ► Leading Employers, a German Düsseldorf-based employer evaluation system, ranked Uniper in the top 1% of German companies.
 Service and goods suppliers	<ul style="list-style-type: none"> • Good financial position and the ability to take care of agreed obligations • Fair and equal treatment of suppliers • Long-term business relations and collaborative development of business and products/services • Responsible operations 	<ul style="list-style-type: none"> • Fortum, excluding Uniper, updated the ► Supplier Code of Conduct; established and communicated the new Purchase Order policy; implemented a new tool for qualifying, sourcing, contracting and collaborating with suppliers; and increased contractor safety actions during Covid-19 times. • Fortum and Uniper intensified cooperation and identified significant procurement synergy potential.

Stakeholder expectations		Our actions in 2020
 Authorities and decision makers	<ul style="list-style-type: none"> • Compliance • Integration of sustainability with strategy and business, risk management • Transparency and reliable reporting • Maintaining dialogue • Constructive, knowledgeable and open lobbying, reliable partner in policy development 	<ul style="list-style-type: none"> • Fortum communicates openly and engages actively in dialogue with authorities and decision makers: in 2020, among other things, we advocated for the further development of market-driven climate policy, ► technology neutrality and EU sectoral legislation in climate change mitigation and adaptation, ► power market design and flexibility, and also promoted the electrification of society and ► circular economy. • Fortum and Uniper are listed in the ► European Union Transparency Register of organisations engaged in influencing the making and implementation of EU policy. • Fortum provides authorities with constructive suggestions on legislative proposals: in 2020, we participated in the preparation of the ► EU sustainable finance legislation, advocated for ► an ambitious climate target for 2030, contributed to several initiatives in the framework of the European Green Deal, and stepped up Fortum's profile in hydrogen lobbying. In addition, we promoted competitive energy taxation to support electrification. In the Nordic countries, we participated actively in the discussion on the power market development, calling for more intensified Nordic cooperation. • Fortum publishes position papers and views on energy sector and policy development, and communicates them in multiple media: in 2020, we published an Energy Review on the ► Decarbonisation of the Nordics.
 Media	<ul style="list-style-type: none"> • Reliable corporate communications that understands media's needs 	<ul style="list-style-type: none"> • The guiding principle of communication is to always communicate fairly, proactively, and openly. • In 2020, our special focus on communicating the strategic focus areas for the upcoming years and the strategy alignment between Fortum and Uniper. • Fortum provided the media with a number of interesting news topics that attracted both domestic and international interest. • In Finland, we brought to primetime television a series called Riku Rantala & 100 questions about climate. The series tackled climate change from many different perspectives. • Fortum's experts and members of the management team actively discuss different current topics in our corporate blog, ► ForTheDoers.
 Energy sector organisations	<ul style="list-style-type: none"> • Advocating on behalf of the shared interests of the sector • Dialogue and expertise 	<ul style="list-style-type: none"> • Fortum actively participates in organisational activities of our sector: in 2020, we were represented in several dozen organisations at the EU level and in our operating countries. • In addition to sector organisations, Fortum, excluding Uniper, is involved in international initiatives promoting market-driven energy and climate policy: UN Caring for Climate, the World Bank's Carbon Pricing Leadership Coalition and the Finnish Climate Leadership Coalition (CLC). • Fortum participates in the international Corporate Responsibility and Sustainability Council, part of The Conference Board of Europe. Uniper is a member of ► EconSense, a Forum for Sustainable Development of German Business. • Both Fortum and Uniper are members of Bettercoal and promote the continuous improvement of sustainability performance in their coal supply chains in cooperation with other European energy companies.
 NGOs	<ul style="list-style-type: none"> • Responsibility for operations and risk management • Promoting renewable energy production and discontinuing the use of coal • Reliable and open reporting 	<ul style="list-style-type: none"> • In 2020, Fortum invested EUR 372 million in CO₂-free production. • Fortum and Uniper had an active dialogue with NGOs on coal phase-out, human rights issues along the coal supply chain, and the environmental impacts of gas exploration and transport. • We published a ► Coal procurement at Fortum and Uniper press kit on Fortum's website. • In spring 2020, Fortum, excluding Uniper, published its first Task Force on Climate-related Financial Disclosures (TCFD) report. Uniper is also committed to develop the TCFD reporting. Both companies are TCFD supporters. • Fortum has developed climate risk management as part of the company's risk management process.
 Local communities	<ul style="list-style-type: none"> • Operational safety • Developing employment, infrastructure and recreational use • Reducing emissions, noise and other detriments 	<ul style="list-style-type: none"> • Emergency preparedness exercises were held in 2020 at the Loviisa nuclear power plant and in some other operating locations. Additionally, safety assessments were conducted at critical power plant locations in the Nordic countries, Poland and Russia. • Fortum, excluding Uniper, improved the company's resilience by updating business continuity plans, concentrating especially on possible Covid-19 pandemic-related disruptions; developed and implemented several remote functionalities to ensure productivity and operative flexibility, including virtual safety walks; and improved the preparedness for cyber threats with a cyber security improvement programme, including, e.g., security of power production. • Fortum and Uniper started cooperation in prioritised areas of corporate security. Our cooperation focused on cyber security, including network traffic monitoring, and business security, including crisis management. • Fortum, excluding Uniper, collaborates with local communities in our operating countries through our ► Corporate Social Responsibility programme.

Increased dialogue with environmental NGOs and investors

The discussion on climate change mitigation and particularly phasing out coal in energy production has continued actively throughout the year. Connecting Uniper's new Datteln 4 coal-fired power plant to the grid in Germany in June 2020 was a focus of attention of environmental NGOs in Europe in 2020. Stakeholders voiced their concerns directly with Fortum, e.g., through open letters, on social media, at demonstrations, and by organising various public events and webinars.

Fortum has responded to the concerns raised by these organisations on social media, at several face-to-face and virtual meetings, and at the Annual General Meeting (AGM). In Finland, Fortum organised several, mainly virtual, meetings with representatives of Greenpeace, WWF, Coal-free Finland, Amnesty International, and Finnwatch. Fortum's experts have also responded to presented questions through blog postings and by giving numerous media interviews. To promote a constructive and fact-based conversation about climate change, Fortum collaborated with Finnish journalist Riku Rantala to produce a TV talk show discussing climate change from various angles. Riku Rantala had full journalistic freedom over the script and invited guests, among others, representatives from NGOs, academia, and business. The series aired on Finnish primetime TV in November–December 2020.

Working with investors

Fortum's dialogue with investors also continued to be active during the year with an increasing focus on environmental topics. The setting of Group-wide climate targets and pathways to reach those targets, including clear coal-exit plans, was central in these discussions. Investors have varying views on climate-related topics, and Fortum is actively engaged in the dialogue with a broad range of different investors and investor coalitions. Fortum utilises their input to constantly develop business operations and its strategic decarbonisation agenda to reflect also the requirements of the capital markets. Investor dialogue is constructive, and Fortum appreciates investor support in driving the energy transition. In addition to



setting Group-wide climate targets, Fortum is working on increasing transparency on related areas, such as lobbying activities.

Fortum's shareholders voiced their climate agenda also at the AGM. Fortum shareholder WWF Finland put forward a motion on Fortum's AGM to amend Fortum's Articles of Association. The shareholder proposed that the target of the Paris Agreement to be included in Fortum's Articles of Association. In a statement on the proposal, the Board of Directors noted that consistent work for a cleaner world is at the core of everything Fortum does and the company strategy is built on the premise that Fortum will succeed in a decarbonised society, and that the aim was to set emission reduction targets covering the whole Fortum Group by the end of 2020. However, the Board recommended to reject the proposal because it would have meant a deviation from the company's purpose to generate profits to its shareholders in the long-term, as required by the Limited Liability Companies Act, towards the direction of a non-profit organisation. The Annual General Meeting resolved to reject the proposal.

Fortum lobbies for tighter climate targets

In 2020, the European Commission started the process to revise the EU 2030 climate target with the view of proposing a cut in GHG emissions of at least 55% from 1990 levels, compared to the existing reduction target of at least 40%. The process included a public consultation to which ▶ [Fortum responded](#). The Commission is expected to publish legislative proposals in summer 2021.

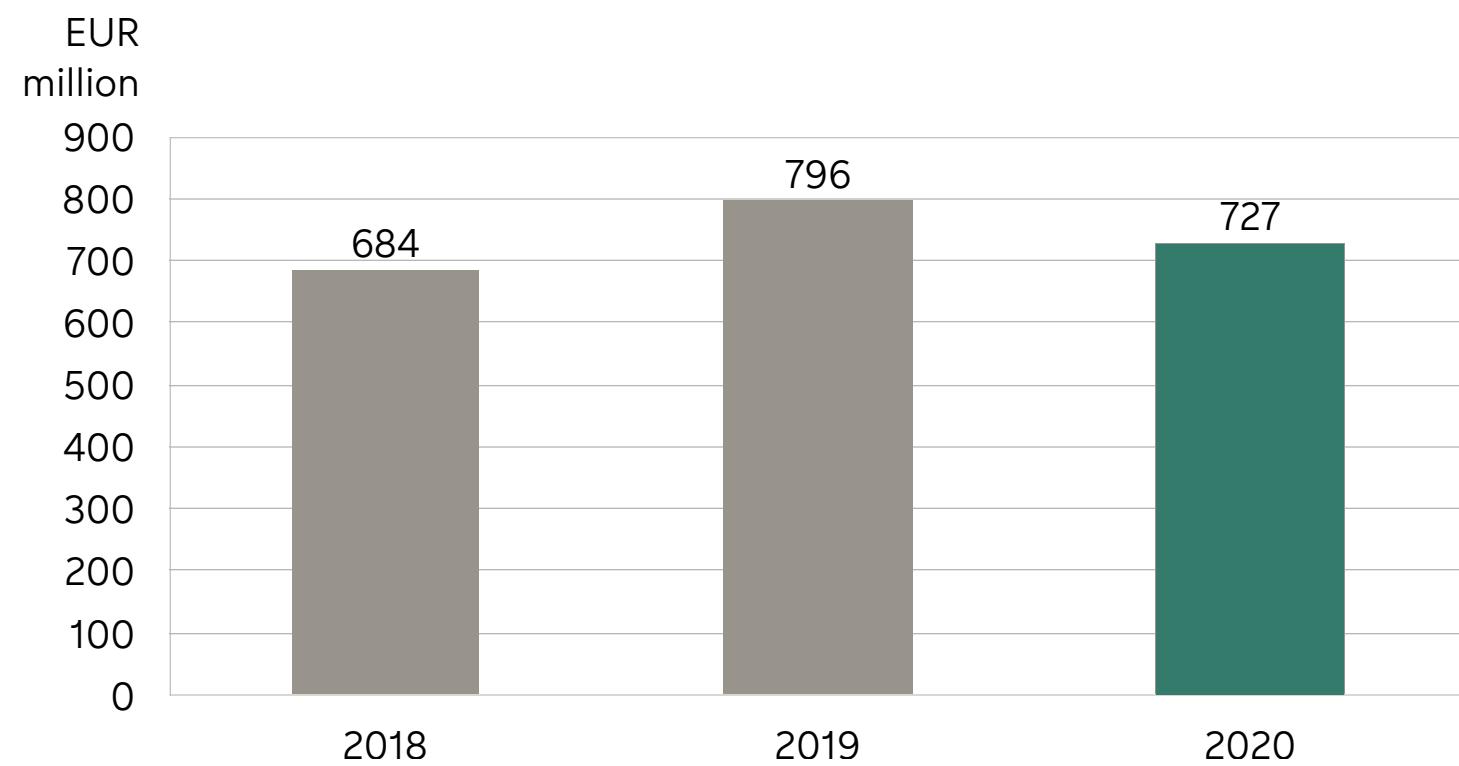
Fortum supports increasing the 2030 GHG reduction target to at least 55% and proposes the ▶ [reinforced and extended EU emissions trading system \(ETS\)](#) to take the main responsibility for the increased emissions reduction effort. A more ambitious 2030 target should be accompanied by the most cost-efficient policy measures, and overlapping policies should be avoided. The 2030 target setting should also take into account carbon removals and negative emissions, which will be important to reach the tightening targets.

Reputation

According to the One Fortum Survey conducted in 2020 our reputation developed varyingly among our different stakeholder groups compared to the 2019 results. This survey did not include Uniper's stakeholders. Positive development was seen especially among Fortum's own employees, among whom the reputation index reached an all-time high score of 82 (on a scale of 0–100). Among decision makers and the capital market, the index remained stable at a very good level, reaching scores 77 and 76, respectively. Among media representatives, the global average score increased by 5 units, reaching a score of 73. However, this improvement was driven by the fact that Russia was included in the media survey scope for the first time in 2020.

The most significant negative change compared to the 2019 results happened among NGOs, among whom the global average result decreased by 8 units to 68. The drop was driven by an exceptional 16-point fall in Finland. The NGOs' negative reaction in Finland was mostly caused by the opening of Uniper's coal-fired power plant,

Brand value development in 2018–2020¹⁾



¹⁾ Excluding Uniper

Datteln 4, in Germany. All in all, Fortum's reputation continues to be the weakest among the general public, regardless of the slight positive development in 2020.

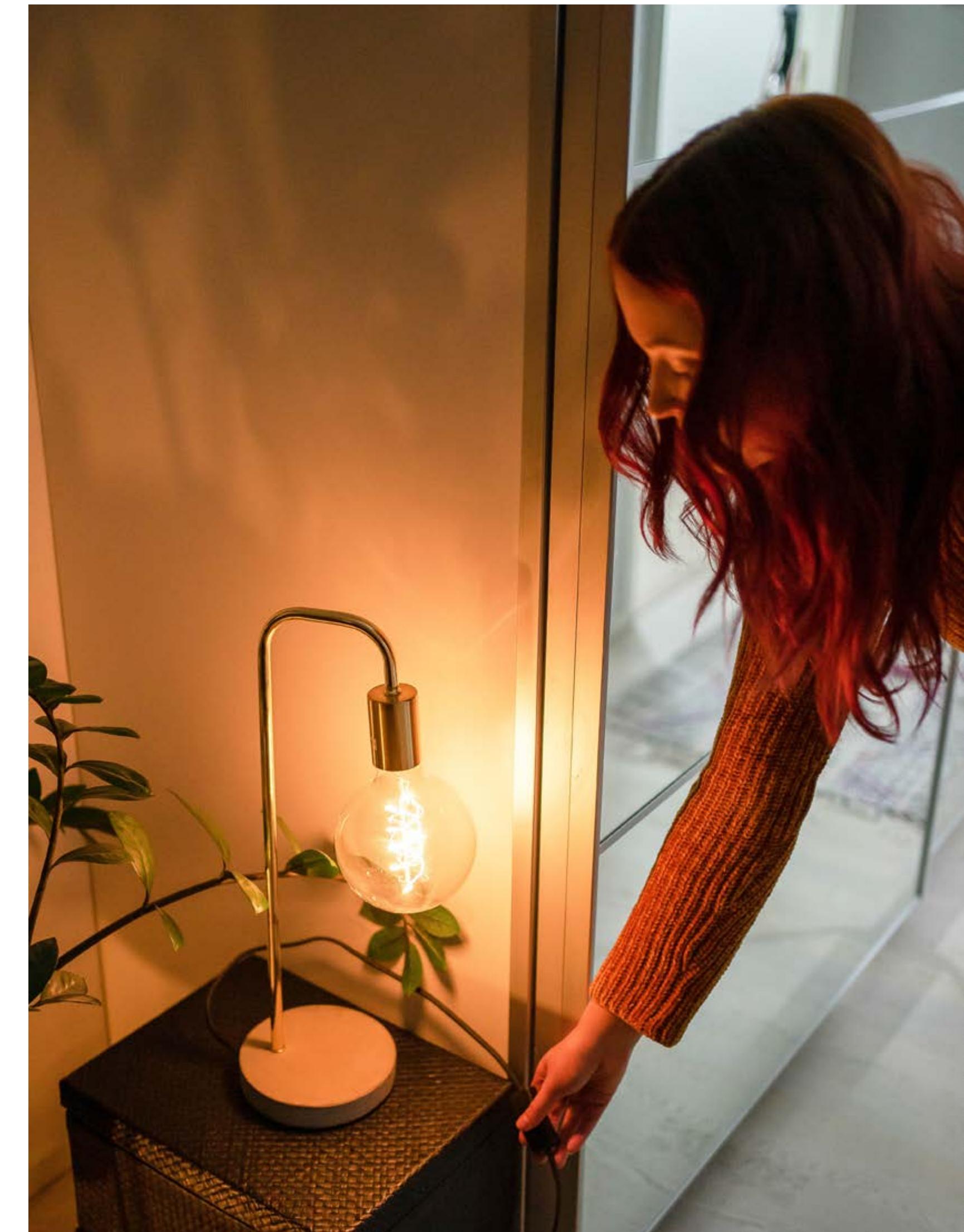
According to the survey, our most significant strength in terms of reputation is our operational expertise. By contrast, we have most room for improvement in social responsibility. As an improvement action, we started a Corporate Social Responsibility ► **(CSR) Programme**, with a clear target to increase and focus our societal activities in our strategic areas.

The target for Fortum's reputation, excluding Uniper, in 2020 was ≥72.5 in the One Fortum Survey, measured as the average rating by all stakeholders included in the survey. In 2020, the target was reached with a score of 72.5 (2019: 72.3).

Brand

We continuously monitor the development of the Fortum brand, i.e. the image of our company. Brand tracking includes the measurement of, e.g., brand awareness, preference and brand attributes.

We also monitor the development of Fortum's brand value with the Brand Value study performed by Brand Finance, an independent business valuation consultancy. According to the most recent study, Fortum's brand value in 2020 was EUR 727 million, compared to EUR 796 million in 2019.



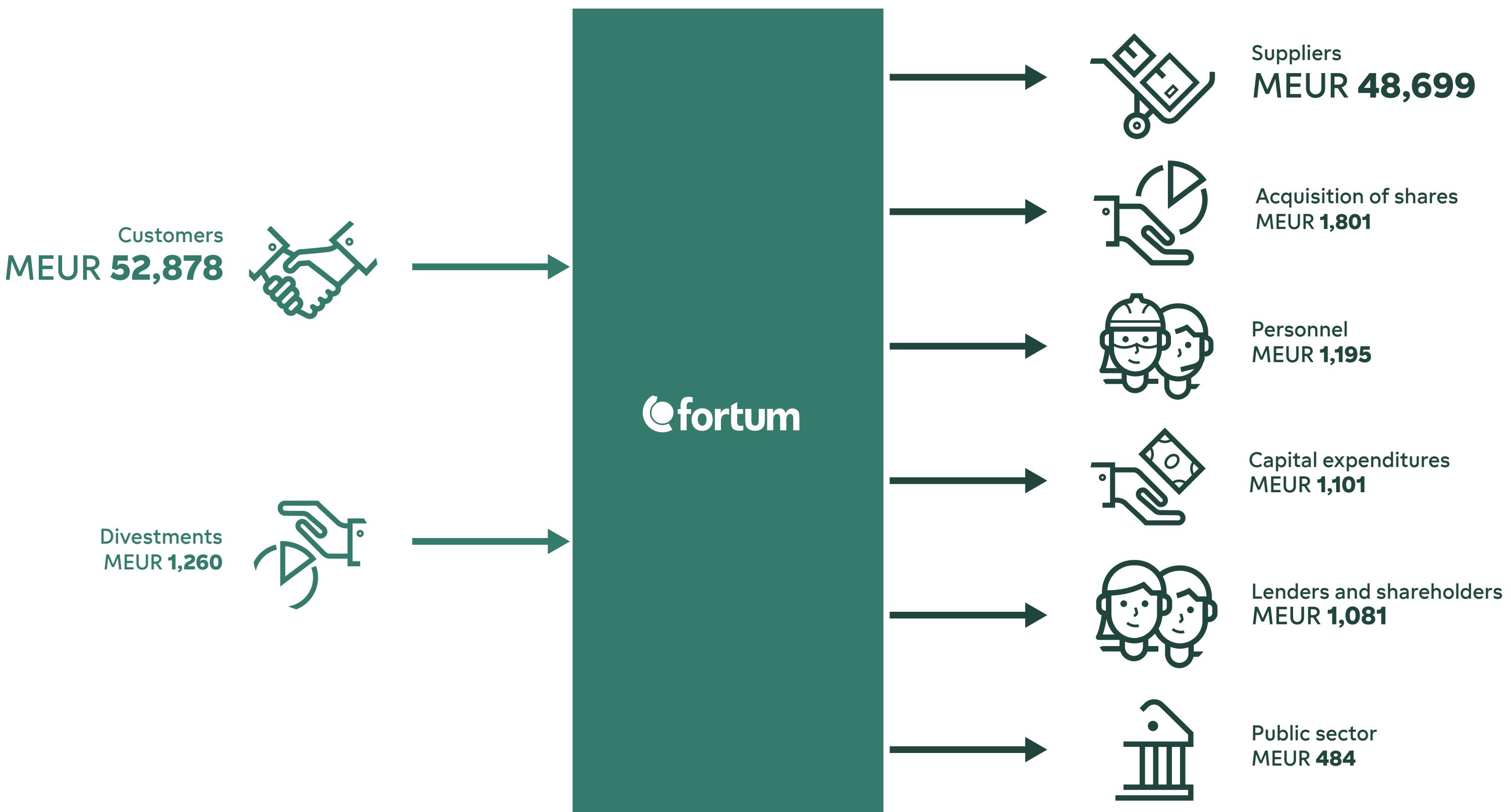
Economic impacts

Fortum is a European energy company with activities in more than 40 countries. We continuously monitor the impact and added value generated by our operations to our stakeholders. The key stakeholders include lenders and shareholders, customers, personnel, suppliers of goods and services, and the public sector.

Direct and indirect impacts

The most significant direct monetary flows of Fortum's operations come from revenue from customers, procurements of goods and services from suppliers, compensation to lenders, dividends to shareholders, growth and maintenance investments, employee wages and salaries, and taxes paid. Our operations also have indirect economic impacts. The Finnish State owns 50.8% of Fortum's shares, and we contribute to a functioning society by, among other things, paying taxes and dividends. These secure society's basic functions and build wellbeing. Investments and the procurement of goods and services provide employment both locally and outside our operating areas. New investment proposals are assessed against sustainability criteria. In terms of suppliers of goods and services, we also assess the global impacts, paying particular attention to suppliers of goods and services operating in risk countries. The wages and taxes paid have a positive impact on local communities.

Distribution of added value



Personnel Safety and security Human rights Stakeholders Customers Corporate citizenship Supply chain

Monetary flows by stakeholder group in 2018–2020 (GRI 201-1)¹⁾

EUR million		2020	2019	2018
Generation of added value				
Income from customers *	Income from customers on the basis of products and services sold and financial income	52,878	5,876	5,262
Divestments	Income from divestment of shares, business activities or plants	1,260	88	298
Purchases from suppliers *	Payments to suppliers of raw materials, goods and services	-48,699	-3,365	-3,189
Fortum produced added value		5,439	2,599	2,371
Distribution of added value				
Compensation to employees	Wages, salaries and remunerations, and other indirect employee costs	-1,195	-480	-459
Compensation to lenders and shareholders	Dividends paid to investors, interest, realised foreign exchange gains and losses, and other financial expenses	-1,081	-1,170	-923
Public sector	Income and production taxes paid, support for society and donations	-484	-298	-270
Distributed to stakeholders, total		-2,760	-1,948	-1,652
Surplus/deficit cash *		2,679	651	719
Capital expenditures		-1,101	-695	-579
Acquisitions of shares		-1,801	-107	-4,088
Surplus/deficit including investments		-224	-151	-3,948

1) Uniper consolidated as of Q2/2020.

* In 2020 monetary flows related to net margin liabilities and nuclear funds have been reclassified. Comparatives have been reclassified accordingly. For more information, see Note 1 Significant accounting policies in the Financial Statements.

In 2020, the difference between added value generated and distributed to stakeholders was EUR 2,679 million for the development of own operations.

The distribution of the economic added value generated by our operations to the most significant operating areas is disclosed in the following parts of the annual reporting:

- ▶ Sales by geographical area based on customer locations:
[Financial Statements, Note 6](#)
- ▶ Employee costs by country
[Tax footprint 2020](#)

We have included investments in our own assessment of economic impacts, as their annual volume and impact on society is significant. In 2020, we invested EUR 372 million in CO₂-free energy production. Capital expenditure by country and by production type is presented in the Financials 2020, in the section Key figures 2011–2020, Capital expenditure.

Provisions related to nuclear power are covered in the Financial Statements, Note 28 Nuclear-related assets and liabilities. Financial implications and other risks and opportunities due to climate change, as well as emissions trading, are reported in the section ▶ [Climate](#). Our pension arrangements conform to the local regulations and practices in each operating country; the arrangements are discussed in the Financial Statements, Note 30 Pension obligations.

Customers

As a responsible actor in the electricity, gas, heating and cooling business, Fortum offers customers environmentally friendly and cost-efficient products and services. It also ensures the reliability of its marketing and communications. Through customer satisfaction, Fortum reflects the responsibility of its business among various stakeholders.

Product responsibility

Together with our subsidiary Uniper, we are the third largest producer of CO₂-free electricity in Europe and a significant player in gas. Fortum is the largest electricity retailer in the Nordic countries and one of the leading heat producers globally.

Furthermore, Fortum provides industrial and infrastructure customers with decarbonisation and environmental solutions, such as grid stability, waste-to-energy, and low-carbon industrial solutions, and aims to capture the opportunities in hydrogen as they become commercially available.

CO₂-free and guarantee-of-origin-labelled electricity

Fortum is one of the Nordic countries' leading sellers of carbon dioxide-free and guarantee-of-origin-labelled electricity. We sell CO₂-free electricity to our customers in the Nordic countries and Poland. The origin of the electricity produced from renewable energy sources, such as hydro, wind, and solar, was guaranteed with European guarantees of origin. Some of the electricity we sell is also guaranteed with the pan-European EKOenergy label granted by environmental organisations and, in Sweden, with the Bra Miljöval label.

Services for customers

In recent years, Fortum has introduced many new services that reduce environmental impacts and give customers better opportunities to control their electricity consumption and costs. The sustainable solutions we offer in energy production, traffic, and waste management

also support a circular economy. The number of consumers participating in energy production is growing. The solutions offered by Fortum are related to home automation, smart EV charging, local energy production and storage, and flexible demand. Additionally, we offer diverse expertise services for energy systems, electricity and heat production, and for the process industry. We utilise our competences to also help industrial and infrastructure customers reduce their carbon and environmental footprint, see the sections ▶ **Climate** and ▶ **Energy**.

Marketing communications

Our goal is to present products and services truthfully in all our marketing and communications materials. We follow responsible marketing communication guidelines, and we do not present misleading statements. In statements regarding environmental issues, we follow the regulations for environmental marketing.

In 2019, Fortum received from the Finnish Energy Authority a decision regarding notifications to consumers and the pricing practices of certain electricity products. Fortum has implemented the decision and has, in order to seek further certainty on the interpretation of the decision, appealed to the Market Court in 2020. The final decision from the Market Court has not yet been received. In addition, Fortum received from the Finnish Competition and Consumer Authority certain requests to clarify and resolve a couple of complaints that had been received from specific consumers. These requests for clarification have been addressed within the deadline and most requests have been resolved with the individual consumers.

In Sweden, the Swedish Consumer Agency and the Ethics Committee for Direct Marketing instructed Fortum to implement certain changes to the company's marketing communications and processes. Fortum implemented the requested changes and the case has been closed. Fortum was earlier identified by the Swedish Consumer Energy Markets Bureau as one of the electricity companies with a relatively substantial number of customer complaints. An improvement programme was launched in the company and that significantly decreased the number of complaints; as a result, Fortum is no longer being identified as such

a company. In addition, Fortum has received certain inquiries from NIX-nämnden (a self-regulatory organisation in the field of direct marketing) regarding its telemarketing activities; Fortum has given its written replies to the inquiries.

In Norway, Fortum received a decision from the Norwegian Energy Authority ordering Fortum to discontinue its payment solution service. The service includes an account for payment of electricity bills that provides a flexible payment solution to Fortum's customers. Other Norwegian electricity suppliers offering similar payment solution services have also been ordered to discontinue their services. Fortum is challenging the legal basis for the decision and has appealed the decision to the Energy Appeals Board. In addition, Fortum received from the Norwegian Consumer Authority certain inquiries and instructions relating to sales processes with consumer customers. Fortum has been in dialogue with the Consumer Authority and is currently in the process of implementing the requested changes.

Fortum received two inquiries from the Polish Competition and Consumer Authority. The first inquiry regarded engagement in practices infringing on collective consumer interests; Fortum has submitted commitment proposals and a position on the consumer complaints. The second inquiry regarded the use of contractual templates containing prohibited provisions. Fortum has provided the authority with the required information and documents and remains in dialogue with the authority regarding the case.

Customer data protection

Fortum, excluding Uniper, has in place the Fortum Privacy Programme. The programme ensures that Fortum has the appropriate processes in place to protect the rights of our customers and that our businesses can utilise and process data in accordance with laws. Uniper has similar practices in place to ensure the secure handling of personal data.

In Finland, Fortum received from the data protection authority a decision regarding the processing of personal data in connection with certain marketing activities. Fortum has implemented the decision.

In Sweden, Fortum notified the data protection authority of three personal data breaches. In all three cases, the data protection authority has closed the cases based on the information Fortum provided. In Norway, Fortum notified the data protection authority of one personal data breach. The authority has questioned whether the case falls within its jurisdiction and a decision is still pending. In Poland, Fortum notified the data protection authority of one personal data breach. The authority made several inquiries, and Fortum has provided the authority with all the necessary information, but the proceedings are still pending.

► Products and services

Customer satisfaction

For Fortum, customer satisfaction is a top priority in implementing the company's strategy and in growing the business. We have set a target for customer satisfaction (≥ 70), with the exception of Uniper, which was not part of the target setting and survey scope for 2020–2021.

Fortum, excluding Uniper, measures customer satisfaction as part of the extensive One Fortum Survey. The survey is conducted yearly in spring. The Consumer Solutions division measures satisfaction also in autumn. In 2020, more than 9,200 customers from seven different business units took part in the yearly survey.

As a whole, for a large share of Fortum's business units, the customer satisfaction is at a good level (customer satisfaction index ≥ 70 on a scale of 0–100) or at a very good level (≥ 75), with a range varying from 61 to 81.

Of all Fortum's customer groups, the most satisfied customers are in the Nuclear Services and the Recycling & Waste units. The customer satisfaction rating of both business units remained stable in 2020 compared to 2019, and both received excellent ratings of 80 and 81. Satisfaction among our district heating customers increased in 2020, among business customers to 77, and among consumer customers to 72. The customer satisfaction of Fortum eNext, which provides e.g. power plant services, rose slightly and reached a very good level of 75.

Satisfaction among electricity retail customers increased significantly for almost all retail brands, and overall the rating was clearly higher than the previous year's level, among consumer customers 70 and among business customers 64.

Customer satisfaction with Fortum Charge & Drive, offering charging solutions for electric vehicles, decreased slightly among consumers to 61, while satisfaction among the international SaaS customers increased to 74. Satisfaction among the housing association segment was 64. Fortum's other electric vehicle charging brand, Plugsurfing, increased its customer satisfaction to 67.

Other public customer satisfaction results

The international and independent EPSI Rating annually surveys the level of satisfaction of electricity retail company customers in Finland, Sweden and Norway.

Customer satisfaction in 2018–2020¹⁾

	2020	2019	2018
Finland			
Fortum	64.3	63.4	74.1
Sweden			
Fortum	62.7	64.6	59.8
Göta Energi	68.5	66.5	64.4
SverigesEnergi ²⁾	-	-	58.2
Norway			
Fortum	-	68.8	-
Hafslund Strøm	62.1	65.0	66.5
NorgesEnergi	64.6	68.4	68.6

1) In Finland and Norway, the survey is conducted by EPSI Rating. In Sweden, the survey is conducted by Svenskt Kvalitetsindex, which is part of the international EPSI Rating Group.

2) SverigesEnergi and Göta Energi have merged and the company continues under the name Göta Energi.

Uniper's customer satisfaction

Accelerated by the Covid-19 situation, Uniper carried out several initiatives including digital ones to develop the way the company interacts and collaborates with its customers. Partly owing to these initiatives, Uniper was ranked among the top 5 in customer satisfaction in the German energy business in news network Welt's survey.



Corporate citizenship

Social responsibility is a cornerstone of Fortum's operations. Our operations impact the local communities where our plants are located, and we engage in many kinds of collaboration with local stakeholders.

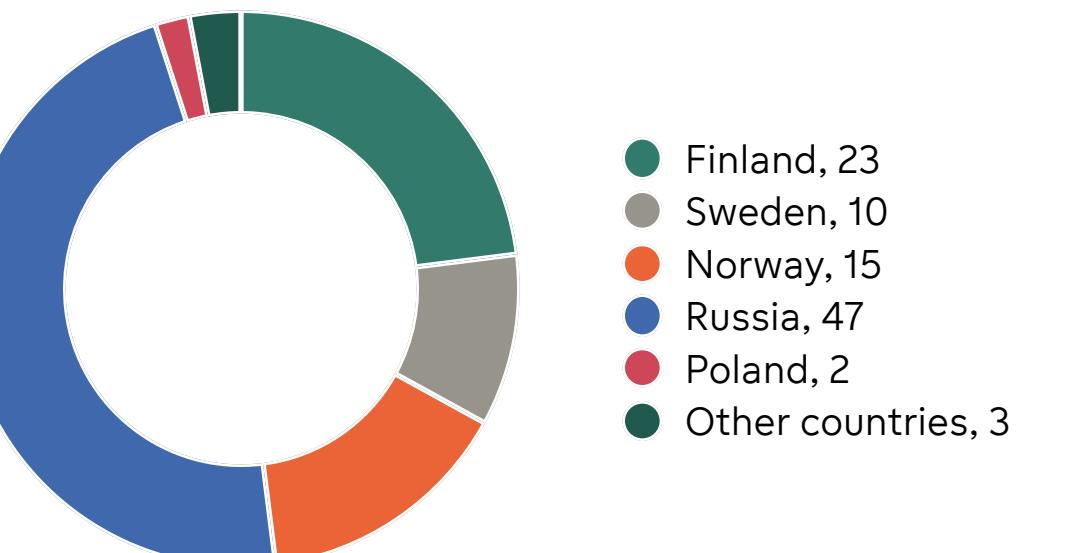
We support activities promoting the common good in society, including the work of organisations and communities in our operating countries. Fortum also engages in collaboration with different research and development projects with universities. In 2020, Fortum's, excluding Uniper, support for activities promoting the common good totalled about EUR 2.5 (2019: 3.0) million; we also supported the Consumer Solutions division's "Good Cause Partners". Our contribution for activities promoting the common good decreased due to some project delays caused by the Covid-19 pandemic. An important milestone was the start of a new Corporate Social Responsibility programme with strategic focus areas.

Corporate Social Responsibility Programme

In 2020 we decided to redefine our way of cooperating with communities and organisations and to align this work with our strategic priorities. We launched a Corporate Social Responsibility (CSR) Programme, which covers societal initiatives undertaken by Fortum companies, excluding Uniper, in our neighbouring communities worldwide. The programme's focus areas are: (i) Climate, including environment- and water-related topics, (ii) Material revolution, including material use, recycling and waste management topics, and (iii) People, with a particular emphasis on youth, children and education. We continue to have some ongoing collaboration commitments related to other themes also, but our target is to gradually align all our projects with the CSR programme themes.

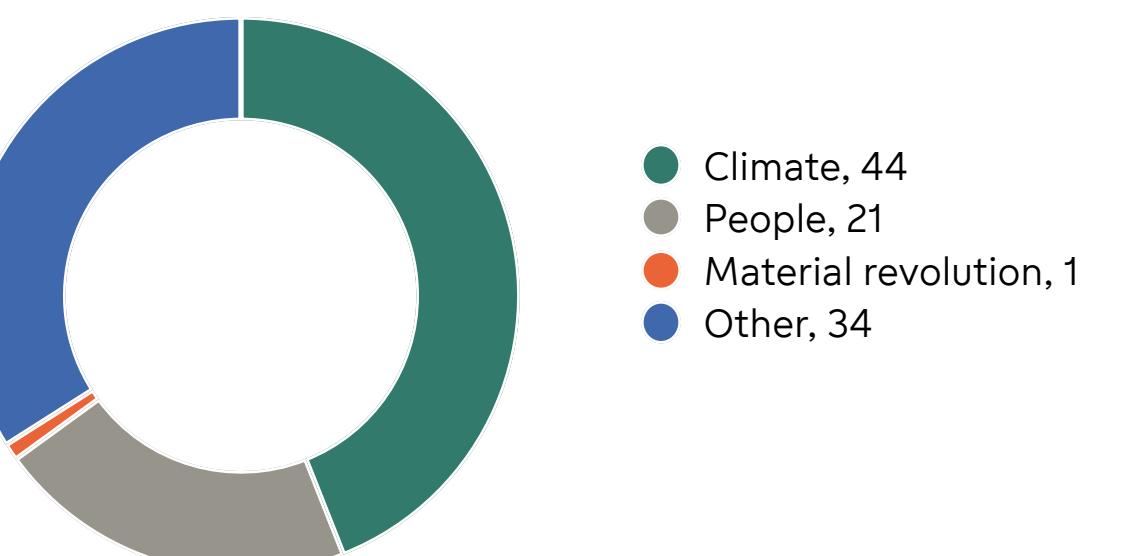
In 2020, the CSR programme initiatives concentrated on People, as the Covid-19 pandemic created an increased need for practical help and we wanted to offer our support during the difficult times. We supported local communities in Poland, Latvia and India in their fight

Support to society by country, %¹⁾



¹⁾ Figures excluding Uniper

Support to society by target, %¹⁾



¹⁾ Figures excluding Uniper

against Covid-19 by providing protective equipment and materials (e.g., gloves, face masks, sanitisers) to local communities and healthcare units. In Russia, we supported local charity organisations fighting the crisis in Tyumen, Chelyabinsk and Ulyanovsk. In Bhadla, India, we distributed food packages to local villagers during lockdown.



Case | Fortum's support to Nordic societies during the Covid-19 pandemic

After the outbreak of the Covid-19 pandemic, our Corporate Social Responsibility (CSR) programme initiatives have focused on people as the pandemic has created an increased need for services and help in societies. We want to do our share and assist in making the situation easier for the most vulnerable ones. We support community relief programmes working with children, elderly and also youth with mental distress. In 2020 we started cooperation with some carefully selected organisations and the work will evolve in the coming years.

Co-operation with local Nordic associations in 2020

Finland

In Finland Fortum has supported the work of three national organisations in 2020. With our financial support the [► Mannerheim League for Child Welfare](#) (MLL) has been able to provide free-of-charge phone and chat support services to children and youth for a period of one year; over 1,000 children were provided with support and advice through these channels each month. MLL was also able to extend the opening hours of these services. Our support also enabled the Central Association of Mental Health in launching a set of online workshops for young people, aiming at helping them maintain social contacts and increase resilience during the Covid-19 pandemic. Not only young people, but especially the elderly have been effected due to reduced possibilities for social contacts. For this reason we decided to assist the

[► Finnish Association for the Welfare of Older People](#) (VTKL) in introducing a new phone service line called Vahvikelinja. The phone line is targeted at elderly people looking for a discussion partner to ease up loneliness.

In addition to providing financial support, we have supported the three Finnish organisations in increasing their visibility in different media channels so that as many people as possible would be aware of their services, support and fund-raising aspirations. We have also provided opportunities for cross-

partner co-operation, for example by hosting a recreational day for less privileged families together with our commercial sponsoring partner Laguuni, a water sports center, and MLL. We also provided edible herbs to a few nursing homes for the elderly in Espoo in co-operation with our commercial sponsoring partner Pinoa Foods and VTKL.

As many entrepreneurs are also suffering due to Covid-19, we decided to participate in the Enter 2020 Taskforce of the Confederation of Finnish Industries (EK) focusing on sharing best corporate practices on how to cope with the pandemic situation.

Sweden

In Sweden we started collaboration with [► Maskrosbarn](#) (Dandelion Children), an organization that provides support services like chats, discussions and camps for children whose parents have mental challenges or substance abuses. Our co-operation with Maskrosbarn includes also environmental education to young people. In addition, we continued to support [► Min Stora Dag](#), an organisation that provides activities for children and adolescents with critical illnesses and medical diagnoses.

Furthermore, Fortum wanted to support people working in the frontline of the pandemic and provided approximately 4,000 lunch boxes to health care personnel working with Covid-19 patients in six intensive care hospitals in the Stockholm area.

Norway

In Norway Fortum made a financial contribution to [► Sykehusklovne](#) (Hospital Clowns), an organisation with professional actors trained to work with children. The actors visit children aged 0–18 in hospitals, bringing joy to small patients and helping them cope with a difficult hospital day.



Personnel Safety and security Human rights Stakeholders Customers Corporate citizenship Supply chain

Collaboration under the CSR programme, examples from different countries:

Country	Partner organisation	Type of engagement
Finland	► Yrityskylä	The Fortum miniature company is teaching sixth-graders how to work in a profession and earn money credits. Activities relate to heating and cooling, e.g., the ► Espoo Clean Heat project, and provide education on climate change mitigation actions. The cooperation agreement, which was initially signed in 2017, was renewed for the 2020–2023 period.
Sweden	► Städa Sverige	The river clean-up event ► Älvstärdningen , which has been ongoing since 2013, was organised with youth sports organisations. In 2020, 34 locations along five rivers where Fortum has hydropower plants were cleaned by 105 youth sport clubs with over 2,600 participants collecting 30 tonnes of litter. The initiative provides young people an opportunity to do something concrete for the environment while raising money for their sports club. The event also increases participants' awareness of hydropower and Fortum.
Norway	► Miljøagentene (Eco Agents)	Fortum started cooperation with Miljøagentene (Eco Agents), an environmental organisation for children. The Eco Agents have more than 9,000 members and their goal is to engage children in environmental issues. We are planning a joint activity starting in 2021. We sponsored a local running race called Sørmlila that was arranged in the area next to Fortum's waste-to-energy plant in Klemetsrud, Oslo. We continued the tradition called Bluzz to support local community organisations and associations working for the benefit of children and young people in the area of Østfold.
Lithuania	Conscious parenting centre Saulė ir Ménulis	We continued to assist a new generation kindergarten in Klaipėda in the development of its activities. Funds are also aimed to be used for broadcasting local radio shows giving parents advice on educational topics.
Russia		Fortum continued the About Energy programme, which is run in 100 educational institutions and reaches about 13,000 students in the Tyumen, Chelyabinsk, Nyagan and Ulyanovsk regions. The programme aims to teach students on the efficient use of natural resources and engages them in taking environmental issues into consideration in their thinking. In 2020, students focused on saving energy by writing essays that will be published in a book called "Energy Tales" and by conducting research. In addition, students learnt about sorting waste as well as about water and energy consumption.
India		We continued our support for community development in Bhadla, Rajasthan, focusing on women empowerment and children's education. Additionally, we improved the IT infrastructure of a local school near our Bhadla power plant and installed solar panels at a hospital near our Kapeli solar power plant.

All our Consumer Solutions customers are given the option of including a sustainability-themed value-adding service as an add-on to their electricity contract. Through funds accrued through the value-adding service, we support "Good Cause Partners" that are aligned with our Corporate Social Responsibility strategy, such as the ► [Rainforest Foundation](#), ► [John Nurminen Foundation](#), ► [Håll Sverige Rent](#) and ► [Water Aid](#). The level of support is based on the volume of customers choosing to purchase the value-adding service.

Local impacts

We are an important employer and significant tax payer in our operating areas. In addition, our investments improve the local infrastructure.

Of our energy production forms, impacts on local communities and local forms of land use are related to, e.g., hydropower. Hydropower construction and use may alter the fluctuation range and rhythm in the discharge and water level in waterways as well as the fish fauna. These changes impact fishing, recreational use, and boating. We mitigate and compensate the adversities caused by hydropower production through

numerous measures, such as stocking fish and building boat launch ramps.

We communicate openly, honestly and proactively, and we engage in a dialogue with the stakeholder groups located in the vicinity of our power plants. We carry out collaboration projects with local communities. We conduct environmental impact assessments (EIA) for our projects in accordance with legislative requirements. A hearing of stakeholders is part of the EIA process. In addition, relevant stakeholders are heard in all permit procedures.

Examples of city collaboration

We continued publishing the Naapurina ydinvoimala (Nuclear power plant as a neighbour) magazine in Loviisa, Finland, and maintained active dialogue with local residents and Loviisa city representatives. We engage with local decision-makers, associations and residents in Riihimäki and Hausjärvi through, e.g., collaboration meetings that convene twice a year regarding the local impacts of Fortum Recycling & Waste business operations.

In Jelgava, Latvia, we continued the dialogue with stakeholders in connection with the environmental assessment process regarding fuel diversification of the biomass CHP plant. The plan is to start using RDF (Refuse Derived Fuel) in addition to the biomass fuel currently used. We also engaged with Jelgava municipality in a hydrogen project and signed a letter of intent on a common research project for hydrogen production. The plan is that hydrogen will be used as fuel for public transport and for waste-handling trucks operating in the city of Jelgava, which will considerably improve the local air quality. In addition, we engaged local residents in a "Bring your Christmas tree to Fortum's biomass CHP plant and warm up Jelgava" campaign. The Christmas trees were processed into wood chips and used as biomass fuel. The campaign promoted the efficient use of resources and lessened the amount of waste. In Wrocław, Poland, Fortum continued "Clean energy for Wrocław", a programme that primarily aims to develop the district heating network in the city centre to improve air quality.

Examples of community collaboration

► Projects aiming to mitigate the adverse environmental impacts of hydropower production were under way in Finland and Sweden in collaboration with municipalities, research institutes, fishermen and universities. We continued our long-term collaboration with local players in the Oulujoki water system. We constructed a pipe system to divert additional water to Lake Utajärvi in order to improve the water quality and to enhance recreational use of the lake. Another project in the Oulujoki area that was finished in 2020 was a three-year project in the Önköri area to improve the area's biodiversity. In 2020, the project's actions concentrated on improving the recreational use of this valuable nature area by constructing walking paths, bridges, and a bird-watching tower, and improving fishing and boating facilities. Furthermore, several projects to improve the recreational use of the river and lakes, especially boating facilities in different parts of Oulujoki water system, are in the planning phase.

During the Covid-19 pandemic, Uniper donated 5,100 branded community masks to local tram passengers in Düsseldorf and, in cooperation with Microsoft, provided children at SOS-Kinderdorf e.V. Düsseldorf with tablets to enable remote learning. In December 2020, an initiative called ► **Polar Express Arrives In Düsseldorf**, funded by Uniper and organised in collaboration with the city authorities and a local employer association, enabled Christmas presents to be delivered to local children whose parents had lost a job because of the Covid-19 pandemic or who faced financial difficulties.

University collaboration and R&D cooperation projects

The goal of our collaboration with universities and colleges is to develop Fortum's business by supporting our strategic research needs, promote energy-sector research and development, and foster Fortum's recruiting and training opportunities. Fortum, excluding Uniper, collaborated with 40 universities, universities of applied sciences and research institutions in different countries in 2020.

In Finland, Fortum and Metsä Group, with financing from ► **Business Finland** (a Finnish government organisation for innovation funding and promotion), launched the ► **ExpandFibre project**. ExpandFibre is an R&D collaboration and an ecosystem to accelerate the development of sustainable bioproducts. It focuses on upgrading pulp fibres, hemicellulose and lignin from renewable and sustainable sources of straw and northern wood into new bioproducts. Its ambition is to meet the growing demands for sustainable textile fibres and other added value biomaterials. Fortum's ► **Bio2X programme**, which is partly funded by Business Finland, started a project to evaluate the possibilities for building a biorefinery in Germany that would utilise straw as raw material. Straw can offer a new source of raw material for the production of sustainable materials and chemicals.

We also participated in EU Horizon 2020-funded research projects in the Baltics. In Latvia, Fortum continues to take an active part in the ► **THERMOS** (Thermal Energy Resource Modelling and Optimisation System) project. In addition, we participate in the SocialWatt project, which will develop and provide energy suppliers with appropriate tools for effectively engaging with their customers and working together towards alleviating energy poverty.

In Estonia, we are partnering and collaborating with the non-profit clean-tech organisation CleanTech ForEst that supports and funds early-stage green technology startups, advances environmental education and supports energy experts. Our main joint project in 2020 was a programme called Climate LaunchPad Estonia.

In addition, we support research, education and development in the natural, technical and economical sciences in the energy sector through Fortum and Neste Foundation (earlier Fortum Foundation). The grants awarded by the Foundation in 2020 totalled about EUR 612,500 (2019: 660,000). Fortum and Neste Foundation is not part of Fortum Group.

Sponsorships and brand cooperation

In Finland, we continued our cooperation with Art Centre Salmela by offering its visitors the possibility to charge their electric vehicles and mobile phones with renewable energy.

Together with TV celebrity and journalist Riku Rantala and his production company, Fortum created a Finnish TV series about climate change: Riku Rantala & 100 kysymystä ilmastosta (Riku Rantala & 100 questions about climate). The series aired in November-December on the second largest commercial TV channel in Finland. The aim of the series was to bring the discussion of climate change into focus and to increase the awareness of climate-related topics among the general public.

In Norway, Fortum was one of the main sponsors of ► **Øyafestivalen** – an annual music festival held in Oslo, Norway – for the third year in a row. The festival is one of Norway's biggest and most environmentally friendly festivals, but it was cancelled this year due to the Covid-19 situation. Despite the festival being cancelled, we decided to continue our cooperation also this year to support the festival's important contribution to society. As part of Fortum's activities at the festival in 2019, we launched a concept called The Green Rider. The idea was to get artists to sign a pledge calling for festivals to become more sustainable when providing, e.g., sound, lighting and backstage services. In January 2021, we launched The Green Rider 2.0, where artists challenge fellow artists to join the sustainability initiative.

Supply chain

Fortum is a significant purchaser of goods and services. Suppliers are an important part of a successful business, and through responsible supplier selections we also support the achievement of sustainability targets.

Purchases and supply chains

Fortum's total purchasing volume in 2020 was EUR 42.8 billion. For Fortum, excluding Uniper, electricity purchased from the Nordic wholesale electricity market for retail sales, investments, and fuel purchases accounted for the majority of purchases. The rest of the purchases consist of other goods and services related to, for example, operation and maintenance as well as to other functions, such as IT solutions, marketing, and consulting.

Over half, i.e. about 64%, of the purchasing volume, excluding Uniper, was purchased from suppliers operating in Europe, mostly in Finland, Sweden, and Norway. This does not include electricity purchases from the Nordic wholesale market.

About 35% of Fortum's purchases, excluding Uniper, were from risk countries. The majority of these purchases were from Russia. Violations related to work conditions and human rights are more likely in risk countries than in non-risk countries. Fortum's risk-country classification is based on the ILO's Decent Work Agenda, the UN Human Development Index, and Transparency International's Corruption Perceptions Index.

In 2020, Fortum, excluding Uniper, had about 13,000 suppliers of goods and services. About 1,300 of the suppliers were in risk countries. Excluding the Russia Division's local suppliers, there were about 300 suppliers in risk countries.

Fortum and Uniper have started cooperation in procurement development. However, for the time being both companies continue to use their own procurement tools and systems, and therefore consolidated figures for, e.g., purchasing countries are not yet available. Information on Uniper's approach to analysing country risks in supply chains can be found in the section [► Human rights](#).

Sustainable fuel purchasing

The most significant environmental impacts of our supply chain are related mainly to fuels, particularly to coal, natural gas, and biomasses. Among the significant environmental aspects associated with coal mining and natural gas production are the use of natural resources, greenhouse gas and other emissions to air, water and soil, and impacts on biodiversity. In both industries, occupational health and safety of personnel is a significant social aspect. The sustainability aspects of biomass sourcing are related primarily to biodiversity, but risks particularly outside the EU can also include, for instance, illegal logging or human rights violations. In fuel purchasing, special attention is paid to the origin of the fuel and to responsible production. The most significant countries of origin for the main fuels are presented in the table.

Origin of main fuels used in 2020

Most significant countries of origin		
Fuel	Fortum	Uniper
Natural gas	Russia, Norway	Russia, Netherlands, Norway
Coal	Russia, Kazakhstan, Poland	Russia, Colombia, Kazakhstan, South Africa, USA, Australia
Uranium	Russia	Canada, Russia
Wood-based biomass ¹⁾	Finland, Baltic countries, Russia, Poland	USA, Canada, Baltic countries, Russia

1) For Uniper, only purchases for Maasvlakte power plant are included.

Natural gas

In 2020, Uniper worked more closely with strategic gas suppliers to mitigate ESG risks along the value chain, focusing especially on greenhouse gas (GHG) emission transparency, including methane monitoring. Although gas molecules are inherently not fully traceable, there are increasing opportunities to minimise and offset the estimated GHG emissions from gas and LNG transportation, while achieving other positive ESG impacts. In November 2020 Uniper became a member of the Oil and Gas Methane Partnership (OGMP) 2.0, a voluntary initiative

to help oil and gas companies report and reduce methane emissions, foster transparency, and share best practices. Its aim is for the industry as a whole to reduce its methane emissions by 45% by 2025. Promoted by the European Commission and various NGOs, OGMP 2.0 fosters industry-wide collaboration, including with strategic upstream suppliers.

Coal

Both Fortum and Uniper are members of the Bettercoal Initiative and use Bettercoal tools to improve sustainability in the coal supply chain.

Fortum, excluding Uniper, made a commitment in 2018 that 70% of the coal purchase volume (calculated in euros) by the end of 2020 would come from suppliers whose mines have undergone a Bettercoal site-assessment. In 2020, the share decreased to 39% (2019: 66%), and the target was thus not achieved. This was due to a decrease in coal purchases: Fortum's total purchases decreased by 25% compared to the previous year and coal imports to Finland by 45%. All coal imported by Fortum to Europe comes from Bettercoal Suppliers. In our Russian operations, the start of cooperation with a new supplier reduced the share of Bettercoal coal. Calculated in tonnes, the coal coming from suppliers whose mines have undergone a Bettercoal site-assessment was 53%.

Uniper tracks the percentage of coal purchased via direct contracts from Bettercoal suppliers, with a view to increase this number year on year. At year-end 2020, the coal purchased via direct contract from Bettercoal suppliers increased to 68% (2019: 55%).

Fortum, excluding Uniper, has published the names of its significant coal suppliers on its [► website](#). There is more about Bettercoal assessments in the section [► Bettercoal](#).

Uranium

The fuel assemblies used at the Loviisa nuclear power plant in Finland are completely of Russian origin. The fuel supplier acquires the uranium used in the fuel assemblies from Russian mines in accordance with Fortum's agreement. In 2020, the uranium originated from the Krasnokamensk, Khiagda, and Dalur mines. All three uranium mines

have ISO 14001 environmental certification. The Khiagda mine has also an OHSAS 18001 certified occupational health and safety management system. ARMZ Uranium Holding Co., a uranium producer, and TVEL, the company responsible for refining and manufacturing the uranium, have certified environmental and occupational safety systems in place in all their plants, as do the plants manufacturing zirconium material, uranium oxide pellets, and fuel assemblies. Additionally, TVEL's conversion and enrichment plants have in place a certified system for energy management. We regularly assess the quality, environmental, and occupational health and safety management systems of our nuclear fuel suppliers and the manufacturing of nuclear fuel assemblies, and we visit the suppliers on an annual basis. However, in 2020 this was not possible due to Covid-19 pandemic.

Uniper operates the Oskarshamn nuclear power plant (OKG) in Sweden. OKG has contracts with several suppliers of uranium. Most of the uranium comes from Canada, but it is also sourced from Russia and other countries. The environmental requirements OKG places on uranium suppliers are very extensive, and the company conducts its own audits at every step in the fuel chain. OKG evaluates and reviews the suppliers based on aspects such as environment, health, and quality. Evaluations are supported by visiting the mines and production plants and meeting with local stakeholders. Certifications, such as ISO 9000 and ISO 14000, are also taken into account, and suppliers are encouraged to continuously improve their operations.

Biomass

Certified wood-based biomass fuel originates from sustainably managed forests. In 2020, nearly 50% of the wood-based biomass fuel purchased by Fortum, excluding Uniper, originated from certified or controlled sources. For Uniper, this figure was 100%. The biofuel sustainability criteria defined in the EU Renewable Energy Directive (RED II) in 2018 are currently being implemented nationally. Fortum is closely following the development of guidelines by national authorities and preparing to implement the required additions to our current biomass sourcing processes.

Waste-derived fuel

Fortum, excluding Uniper, used waste-derived fuel at power plants in Finland, Sweden, Norway, Denmark, Lithuania, and Poland. The fuel used was mainly municipal and industrial waste collected locally.

► Fuel consumption

Sustainable supply chain

Fortum and Uniper expect their business partners to act responsibly and to comply with the requirements set forth in their respective Codes of Conduct and Supplier Codes of Conduct. Both companies assess the performance of its business partners with supplier qualification and supplier audits.

Codes of Conduct cover basic requirements

The Fortum Code of Conduct and Uniper Code of Conduct are based on similar fundaments, and they establish the basic principles of conduct that everyone must follow. They define how we treat each other, do business, and engage with the world. The Supplier Codes of Conduct, both based on the ten principles of the UN Global Compact, outline the requirements for Fortum's and Uniper's suppliers and business partners.

The Fortum Supplier Code of Conduct is included in purchase agreements with a contract value of EUR 100,000 or more. Uniper's standard supplier agreements require suppliers to comply with Uniper's Supplier Code of Conduct. Both companies reserve the right to monitor whether their suppliers observe the Supplier Codes of Conduct by requesting information and conducting on-site audits. Suppliers who fail to observe the Supplier Codes of Conduct are expected to take immediate corrective action, and both companies reserve the right to terminate relationships with suppliers who cannot demonstrate adherence to the Codes of Conduct.

Supplier qualification

Fortum, excluding Uniper, requires suppliers to complete a supplier qualification process, when the contract value is EUR 100,000 or more. In the qualification process, we determine and assess, among other things, the supplier's possible operations in risk countries, certified management systems, and the occupational safety performance of the contractors. We also pay special attention to anti-corruption practices. When potential risks are identified, the supplier is asked to provide more information or a supplier audit is performed. Depending on supplier's responses, we may continue the qualification process, impose corrective actions, or decide not to qualify the supplier. Once completed, the qualification is valid for three years. At the end of 2020, 77% of Fortum's purchasing volume, excluding Russia Division and Uniper, came from qualified suppliers.

Fortum's Russia Division uses its own supplier qualification process that is based on Russian procurement law. In the Russian operations, we set supplier requirements for business principles, ethics, environmental management, and occupational health and safety practices.

Uniper applies its own supplier qualification process for suppliers with a significant expected annual purchase volume or those that have been marked as having a high or medium health and safety risk. Uniper's qualification process follows similar principles and steps as Fortum's. In addition, Uniper applies its own processes for ESG Due Diligence and Know Your Counterparty.

Supplier sustainability audits

In supplier sustainability audits, Fortum, excluding Uniper, assesses the supplier's compliance with the requirements in Fortum's Supplier Code of Conduct. Audits are done on-site, and they include site inspections, management and employee interviews, and reviews of documents.

Due to the Covid-19 pandemic and travel restrictions, the possibilities to conduct on-site supplier audits have been limited since March 2020. Consequently, Fortum, excluding Uniper, conducted two remote audits during the year. The remote audits targeted a Finnish and a Dutch

supplier and they included management interviews, document reviews, and a virtual site tour.

If non-compliances are found in audits, the supplier makes a plan for corrective actions and we monitor the implementation of them. Fortum uses an international service provider for conducting audits, especially in risk countries. In Fortum's main operating countries, or in case of remote audits, the audits are performed by own personnel.

In 2020, a total of four on-site supplier audits were conducted in India, Indonesia, China, and Finland. The majority of the non-compliances identified in the audits were related to overtime and pay as well as to occupational safety. Non-compliances related to freedom of association and employee collective bargaining rights, child labour, or discrimination were not identified. We issued a recommendation to two suppliers to strengthen their practices related to the prohibition of forced labour. These suppliers can be qualified or the cooperation can be continued only if the corrective actions are implemented and confirmed by a re-audit.

Bettercoal

Fortum and Uniper are members of the Bettercoal Initiative and use the Bettercoal Code and tools to monitor and improve sustainability in the coal supply chain. The Bettercoal Assessment Programme includes the suppliers' Letter of Commitment, self-assessment, and site-assessment. Site-assessment is based on the principles of the Bettercoal Code and covers legal compliance, sustainability policies and management systems, business ethics, human rights and social performance, and environmental performance. The Bettercoal Code was renewed during 2020 and the revised Code was published in March 2021. Based on the site-assessment, a continuous improvement plan is drafted for the suppliers, and its implementation is monitored regularly. Site-assessments are always performed by an external assessor approved by Bettercoal. In 2020, no Bettercoal site-assessments were conducted, due to the Covid-19 pandemic. All coal suppliers participating in the Bettercoal programme and their status in the assessment process are listed on the [Bettercoal website](#).

Bettercoal has established working groups to support its operations in two significant coal procurement countries: Russia and Colombia. The purpose of the working groups is to support the suppliers participating in the Bettercoal assessment programme in continuous improvement and to increase the number of suppliers participating in the programme, identify country risks and find ways to address them, and to improve communications between the different stakeholders. Both Fortum and Uniper participate in Russia and Colombia working groups' activities, and Uniper chairs the Colombia working group.

Despite the limitations imposed by the Covid-19 pandemic, the Bettercoal Russia working group continued its stakeholder engagement activities in 2020. It held two webinars for suppliers that addressed health and safety, and environmental monitoring. As a follow-up of the visit in September 2019, the working group asked the mining companies active in Kuzbass to provide updates on the environmental and social issues highlighted during the visit.

In 2020, the Colombia working group drew on experiences and insights in 2019 to design a detailed action plan and define goals for the prioritised environmental and social aspects related to coal mining in order to have an impact on addressing them. The working group continued to monitor the three major Colombian coal mining companies' continuous improvement plans and to actively engage with stakeholders.

A key element of the working group's 2020 action plan to address and discuss prioritised issues with relevant stakeholders was to be an engagement visit to Colombia. The working group's intention was to meet face to face with governmental agencies, mining companies, international organisations, communities, and unions for in-depth discussions on the prioritised issues and other topics relevant to the Colombian mining context. Due to the pandemic, however, the trip had to be postponed. Nevertheless, the working group continued to engage with Colombian stakeholders virtually in 2020 and will conduct a virtual engagement tour during 2021.

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Governance and management

Sustainability management at Fortum is strategy-driven and based on our Values, Code of Conduct, Supplier Code of Conduct, sustainability-related policies and other Group policies and their specifying instructions.

We comply with laws and regulations. All of our operations are guided by good governance, effective risk management, adequate controls and the internal audit principles supporting them.

Fortum's goal is a high level of environmental and safety management in all business activities. Calculated in terms of sales, 99.9% of Fortum's electricity and heat production operations at the end of 2020 were ISO 14001 environmentally certified and 98.8% were either OHSAS 18001 or ISO 45001 safety-certified. The divisions and sites develop their operations with internal and external audits required by environmental, occupational safety and quality management systems.

Responsibilities

As sustainability is an integral part of Fortum's strategy, the highest decision making on sustainability and climate-related matters falls within the duties of the members of the Board of Directors, who share joint responsibility in these matters. Therefore, Fortum has not established a specific Sustainability Committee for the decision making on economic, environmental and social matters. The Audit and Risk Committee, members of the Fortum Executive Management, and other senior executives support the Board of Directors in the decision-making in these matters, when necessary.

Fortum Executive Management decides on the sustainability approach and Group-level sustainability targets that guide annual planning. The Group's performance targets, including sustainability and climate-related targets, are approved by Fortum's Board of Directors. Fortum Executive Management monitors the achievement of the targets in its monthly meetings and in quarterly performance reviews. The achievement of the targets is also regularly reported to Fortum's Board of Directors. Fortum's line management is responsible for the

implementation of Fortum Group's policies and instructions and for day-to-day sustainability management and improvement plans.

Fortum's Corporate Sustainability unit is responsible for the coordination and development of sustainability at the Group level and for maintaining an adequate situation awareness and oversight regarding sustainability.

Fortum's subsidiary Uniper remains a separate company, listed in Germany, and has its own sustainability governance, processes and reporting. The Uniper SE Management Board bears the overall responsibility for the adoption and implementation of Uniper's sustainability measures. Uniper's highest governance board, the Supervisory Board, monitors the fulfilment of Uniper's sustainability obligations.

Since April 2020, a member of Fortum's Board of Directors acted as the Chairman of Uniper SE Supervisory Board and three of Fortum's Executive Managers were members of the Supervisory Board. In March 2021, the President and CEO of Fortum was elected as Chair of the Supervisory Board. One of Fortum's Executive Managers continues as a member of the Supervisory Board. Two of Fortum's Executive Managers were appointed to leadership positions at Uniper, and they will step down from their positions as members of Uniper's Supervisory Board. New candidates will be nominated for election at the Uniper AGM, to be held in May 2021.

The realisation of safety targets (Lost Time Injury Frequency, own personnel and contractors) is a part of Fortum's short-term incentive (STI) system. Fortum's long-term incentive (LTI) programme includes a climate-related metric. In the 2020–2022 LTI plan, the target is related to the reduction of Fortum's CO₂ emissions aligned with Fortum's strategy. In the 2021–2023 LTI plan, the target is linked to the reduction of Fortum's coal-fired power generation capacity in line with Fortum's coal-exit path, with a minimum level requiring exceeding the communicated ambition level. Both STI and LTI targets are applicable to Fortum only, excluding Uniper. Uniper continues to follow its own STI and LTI plans.

► Corporate Governance Statement 2020

► Remuneration Statement 2020

► Code of Conduct

► Supplier Code of Conduct

► Sustainability Policy

Sustainability management by topic

Sustainability management in the areas of economic responsibility, environmental responsibility and social responsibility is described in more detail in the accompanying table. Additionally, more detailed information about the management of different aspects and impacts and about measures, processes and projects is presented by topic in this Sustainability Report. Fortum's grievance channels have been described in the section ► **Business ethics and compliance**. The purpose of the sustainability management approach is to ensure our operational compliance and to avoid, mitigate and offset the adverse impacts from our operations and to increase the positive impacts.

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Management of economic responsibility

Description	
Targets and approach	<p>For Fortum, economic responsibility means competitiveness, performance excellence and market-driven production that creates long-term value for our stakeholders and enables sustainable growth. Satisfied customers are key to our success and active consumers will have a crucial role in the future energy system. Fortum has indirect responsibility for its supply chain. We conduct business with companies that act responsibly.</p> <p>Each new research and development project is assessed against the criteria of carbon dioxide emissions reduction and resource efficiency. Likewise, new investment proposals are assessed against sustainability criteria as part of Fortum's investment assessment and approval process. In our investments we seek economically profitable alternatives that provide the opportunity to increase capacity and reduce emissions.</p> <p>Our financial targets include a target for capital structure (financial net debt / comparable EBITDA below 2x) and two different hurdle rates for new investments (WACC +100 BPS for green investments and WACC +200 BPS for other investments). Accordingly, Fortum aims to provide good returns for its owners and its dividend policy stipulates to pay a stable, sustainable and overtime increasing dividend. The realisation of financial targets in 2020 is reported in the Financial performance and position section of the ► Financials 2020.</p>
Policies and commitments	The financial management system is based on Group-level policies and their specifying instructions, and on good governance, effective risk management, sufficient controls and the internal audit principles supporting them. Other key elements steering financial management are presented in the section ► Policies and commitments .
Responsibilities	The CFO and the Group's Financial unit, division management, and ultimately the CEO and the Board of Directors are responsible for issues related to finances and financial statements and for broader financial responsibility issues. Our sustainability responsibilities are presented in the section ► Governance and management .
Monitoring and follow-up	<p>The Board decides on the company's financial targets as a part of the annual business planning process. Realisation of the targets is monitored on monthly basis both at the division level and by Fortum Executive Management. Fortum's management monitors the realisation of financial targets quarterly as part of the business performance assessment, and key indicators are regularly reported to Fortum's Board of Directors. Financial key indicators related to investments are monitored in divisions' investment forums and by Fortum Executive Management.</p> <p>We report regularly on the direct and indirect financial impacts on our most important stakeholder groups. Fortum also uses the GRI Sustainability Reporting Standards indicators to measure economic responsibility.</p>

Management of environmental responsibility

Description	
Targets and approach	<p>Fortum wants to enable the energy transition by providing customers and societies a reliable and affordable supply of low-carbon energy. In the future, the energy system – and Fortum's portfolio – will be based on renewable energy, increasingly clean gas (e.g. hydrogen) and nuclear power. In addition, we will continue to offer industrial and infrastructure solutions, e.g., waste-to-energy, grid stability services, as well as energy sales and storage. We strive to continuously reduce the environmental impacts of our operations by using best available practices and technologies. We measure the realisation of the environmental responsibility with the following key performance indicators, for which we have set ► Group-level targets:</p> <ul style="list-style-type: none"> • CO₂ emissions reduction (Scope 1 and 2) in European generation by at least 50% by 2030, and carbon neutral (Scope 1 and 2) in European generation by 2035 at the latest • Carbon neutral globally (Scope 1, 2 and 3 GHG emissions), in line with the goals of the Paris Agreement, by 2050 at the latest • Number of major voluntary measures enhancing biodiversity
Policies and commitments	Environmental management is based on Fortum's, excluding Uniper, Sustainability Policy together with the Minimum Requirements for EHS Management. Uniper has its HSSE & Sustainability Policy Statement and HSSE and Sustainability Improvement Plan. Other key principles steering environmental management are presented in the section ► Policies and commitments . Fortum reviews and reports environmental risks as part of its risk assessment process. The risk assessment process is reported in the section Operating and financial review/Risk management of the ► Financials 2020 . Climate-related risks are reported in the section ► Climate and resources: Climate .
Responsibilities	Our sustainability responsibilities are presented in the section ► Governance and management .
Monitoring and follow-up	<p>The Group's key indicators are reported regularly to Fortum's Board of Directors and are published in Fortum's interim reports. Carbon dioxide emissions and specific CO₂ emissions are reported quarterly, and number of major voluntary measures enhancing biodiversity is reported annually to Fortum Executive Management.</p> <p>The divisions and sites follow and develop their operations with audits required by environmental management systems. Internal and external auditors regularly audit the ISO 14001 standard-compliant management system. The CO₂ emissions of plants within the sphere of the EU emissions trading system (EU ETS) are audited annually on a per plant basis by an external verifier accredited by the emissions trading authority. The verification addresses the reliability, credibility and accuracy of the monitoring system and the reported data and information relating to CO₂ emissions. The plants must annually submit to the authorities a verified emissions report of the previous calendar year's CO₂ emissions.</p>
	Fortum's and Uniper's supply chain monitoring systems also cover environmental responsibility. The approach is described in the section ► Personnel and society: Supply chain . Fortum, excluding Uniper, maps its stakeholders' views annually with the One Fortum Survey and with separate sustainability surveys.

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Management of social responsibility: Employees

	Description
Targets and approach	We aspire to be a responsible employer who invests in the development and wellbeing of our employees. We aim to be a safe workplace for our employees and for the contractors and service providers working for us. We measure the realisation of occupational safety with the following indicator, for which we have set ▶ Group-level target :
	<ul style="list-style-type: none"> Total Recordable Injury Frequency (TRIF), own personnel and contractors
Policies and commitments	Safety management is based on Fortum's, excluding Uniper, Sustainability Policy together with the Minimum Requirements for EHS Management. Uniper has its HSSE & Sustainability Policy Statement and HSSE and Sustainability Improvement Plan. Other key principles steering labour practices and safety management are presented in the section ▶ Policies and commitments . Fortum reviews and reports operational and safety risks as part of its risk assessment process. The risk assessment process is reported in Operating and financial review/Risk management of the ▶ Financials 2020 .
Responsibilities	Our sustainability responsibilities are presented in the section ▶ Governance and management .
Monitoring and follow-up	<p>Fortum personnel and contractor injury frequencies and the number of severe occupational accidents are reported monthly to Fortum Executive Management. The Group's key indicators are reported regularly to Fortum's Board of Directors and are published in Fortum's interim reports. The divisions and sites follow and develop their operations with audits required by safety and quality management systems. Internal and external auditors regularly audit our OHSAS 18001 or ISO 45001 standard-compliant management system.</p> <p>Work wellbeing indicated as a percentage of sickness-related absences, is reported to the Fortum Executive Management every quarter. In addition, work wellbeing is monitored through other indicators, such as the ratio between actual retirement age and the statutory start of the retirement pension.</p> <p>Feedback about the personnel's wellbeing and job satisfaction is also obtained from personnel surveys.</p> <p>Fortum, excluding Uniper, maps its stakeholders' views annually with the One Fortum survey and with separate sustainability surveys.</p>

Management of social responsibility: Human rights

	Description
Targets and approach	Fortum follows and respects internationally recognised human rights, which are included in key human rights treaties. Our goal is to operate in accordance with the UN Guiding Principles on Business and Human Rights.
	Our social responsibility includes taking care of our own personnel and the surrounding communities. We advance responsible operations in our supply chain and more broadly in society. Targets related to our own personnel are presented in the section ▶ Personnel and society: Personnel .
Policies and commitments	Key elements steering human rights management are presented in the section ▶ Policies and commitments .
Responsibilities	Our responsibilities related to human rights are presented in the section ▶ Personnel and society: Human rights .
Monitoring and follow-up	<p>The key tools for monitoring the impacts of human rights are country and partner risk assessments, supplier qualification, and supplier audits.</p> <p>Fortum, excluding Uniper, conducts a human rights assessment for investment projects – especially in new operating areas – and also for new countries where Fortum plans to expand the sales of products and services. The assessments are presented to Fortum Executive Management and to the Board of Directors when needed.</p> <p>Uniper annually performs a worldwide assessment, which is based on a combination of economic and social indexes, to map key potential country-specific issues that may directly affect the company. The assessment findings contribute to the implementation of modified due diligence requirements and mitigation measures, such as the inclusion of specific contract clauses.</p> <p>For Fortum, excluding Uniper, supplier audits that are conducted are reported in our interim reports.</p> <p>Both Fortum and Uniper are members of the Bettercoal Initiative and use the Bettercoal tools to improve sustainability in the coal supply chain.</p> <p>Monitoring systems related to our own personnel are presented in the section ▶ Personnel and society: Personnel.</p> <p>Fortum, excluding Uniper, maps its stakeholders' views annually with the One Fortum survey and with separate sustainability surveys.</p>

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Management of social responsibility: Business ethics (incl. anti-corruption and anti-bribery)

	Description
Targets and approach	We believe that an excellent financial result and ethical business are intertwined. We follow good business practices and ethical principles defined in Fortum's and Uniper's Codes of Conduct. We work within the framework of competition laws and competition instructions. We avoid all situations where our own personal interests may conflict with the interests of the Fortum Group. Notably, we never accept or give bribes or other forms of improper payment for any reason. Our customer relations are based on honesty and trust. We treat our suppliers and subcontractors fairly and equally. We select them based on their merit and we expect them to consistently comply with our requirements and with Fortum's and Uniper's Supplier Codes of Conduct.
Policies and commitments	Key elements steering social and compliance management are presented in the section ► Policies and commitments .
Responsibilities	Our sustainability responsibilities are presented in the section ► Governance and management .
Monitoring and follow-up	Suspected misconduct and measures related to ethical business practices and compliance with regulations are regularly monitored and assessed by Fortum's Audit and Risk Committee. Uniper's Compliance Management System includes quarterly compliance reports to the Uniper Management Board. Uniper's Audit and Risk Committee monitors compliance issues on a regular basis. Internal and external reporting channels are offered for reporting suspicions of misconduct. The channels are described in the Codes of Conduct and accessible on the companies' internal and external webpages. Monitoring systems related to the supply chain are presented in the section ► Personnel and society: Supply chain .

Management of social responsibility: Product responsibility

	Description
Targets and approach	An uninterrupted supply of energy is necessary for a functioning society. We ensure the reliable operation of our power plants with preventive maintenance and continuous monitoring. Our goal is to present products and services truthfully in all our marketing and communication materials. We strictly follow responsible marketing communication guidelines and the regulations for environmental marketing. We assume responsibility for customer data protection and comply with the valid regulations related to the handling of customer data.
Policies and commitments	Key elements steering product responsibility management are presented in the section ► Policies and commitments .
Responsibilities	Our sustainability responsibilities are presented in ► Governance and management .
Monitoring and follow-up	The figures related to asset availability of power plants are reported regularly to Fortum's Board of Directors and are published in Fortum's interim reports. The figures are reported quarterly to Fortum Executive Management. Customer satisfaction, excluding Uniper, is monitored annually with the One Fortum survey. The results of the survey are presented to Fortum's management and they are used to develop the business.

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We follow and respect several international initiatives and national and international guidelines addressing different aspects of sustainability. They guide our operations in the areas of economic, environmental, and social responsibility.

Fortum follows and respects the International Bill of Human Rights, the United Nations Convention on the Rights of the Child, and the core conventions of the International Labour Organisation (ILO). Additionally, Fortum recognises in its operations the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, the International Chamber of Commerce's anti-bribery and anti-corruption guidelines, and the Bettercoal initiative's Code on responsible coal mining.

Fortum is a participant of the UN Global Compact initiative and the UN Caring for Climate initiative. Uniper follows the ten principles of the UN Global Compact, but is not a formal participant.

Sustainability management at Fortum is strategy-driven and based on its Values, Code of Conduct, Supplier Code of Conduct, sustainability-related policies and other Group policies and their specifying instructions. For now, Uniper continues to have its own separate Code of Conduct and Supplier Code of Conduct. Both companies' Codes of Conduct are based on similar fundaments and they establish the basic principles of conduct that everyone must follow. They define how we treat each other, do business and engage with the world. The companies' Supplier Codes of Conduct, both based on the ten principles of UN Global Compact, outline the requirements for Fortum's and Uniper's suppliers and business partners.

Fortum's Sustainability Policy and Uniper's Health, Safety, Security and Environment (HSSE) & Sustainability Policy Statement define the companies' ambitions and priorities for sustainability. Both companies have sound policies and specifying instruction guiding the operations in the areas of environmental matters, social and personnel matters, human rights, and anti-corruption and bribery, listed in the tables.

Fortum's, excluding Uniper, main policies and instructions guiding sustainability

	Economic matters	Climate and resources	Personnel and society			
			Environmental matters	Social and personnel matters	Human rights	Anti-corruption and bribery
Values	x	x		x	x	x
Code of Conduct	x	x		x	x	x
Supplier Code of Conduct	x	x	x	x	x	x
Sustainability Policy (including environmental, and health and safety policies)	x	x	x	x	x	x
Disclosure Policy	x		x			
Group Risk Policy	x	x	x	x	x	x
Minimum Requirements for EHS Management		x	x	x	x	
Biodiversity Manual		x				
Group Manual for Sustainability Assessment		x	x	x	x	x
Group Instructions for Corporate Social Responsibility (CSR) Programme Governance Model	x	x	x	x	x	x
People Policy			x	x	x	
Leadership Principles			x	x	x	
Accounting Manual	x	x	x			
Fortum Insider Rules	x		x			x
Investment Manual	x	x	x			x
Tax Principles	x		x			
Group Instructions for Compliance Management	x	x	x	x	x	x
Group Instructions for Anti-Bribery	x		x			x
Group Instructions for Safeguarding Assets	x		x			x
Group Instructions for Conflict of Interest	x		x			x
Anti-Money-Laundering Manual	x		x			x
Competition Law Compliance Guidelines	x		x			x
Security Guidelines		x	x	x	x	
Privacy Guidelines	x		x	x	x	

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Fortum's, excluding Uniper, EHS minimum requirements are updated annually. In 2020, updates were related to the consolidation with Uniper, the Covid-19 pandemic, and the learnings from the accidents that happened during the year. We report on the training related to the updated instructions in the sections ▶ **Business ethics and compliance**, and ▶ **Occupational and operational safety**.

The highest level policies at Fortum are approved by the Board of Directors. Similarly, the highest level instructions are approved by either the President and CEO or Fortum Executive Management. The highest level policies at Uniper are approved by the Management Board.

Uniper's main policies and instructions guiding sustainability

	Economic matters	Climate and resources	Personnel and society			
			Environmental matters	Social and personnel matters	Human rights	Anti-corruption and bribery
Uniper Way				x		
Code of Conduct	x	x		x	x	x
Supplier Code of Conduct	x	x	x	x	x	x
HSSE & Sustainability Policy Statement	x	x	x	x	x	x
Enterprise Risk Management Policy	x	x	x	x	x	x
ESG Risk Management Policy	x	x	x	x	x	x
Governance & Asset Project Risk Management Policy	x	x	x			
HSSE, Process Safety & Information Security Incident Reporting, Alerts, Investigation and Learning Business Process			x	x		
HSSE Managing Incidents, Emergencies and Crises			x	x		
ESG Due Diligence Business Process	x	x	x	x	x	x
Know-Your-Counterparty Policy	x	x	x	x	x	x
Uniper Procurement Policy	x	x	x	x	x	x
Stakeholder Management Business Policy	x	x	x	x	x	x
Group Finance Policy	x					x
Preventing Insider Trading Business Policy	x					x
Economic Sanctions Business Policy	x					x
Trading Compliance Policy	x					x
Group Tax Guidelines	x					x
Mergers & Acquisitions Business Policy	x					x
Compliance Business Policy	x					x
Physical Asset Policy	x	x	x	x		
Information Security Business Policy	x		x	x		
Data Protection Business Policy	x		x	x		

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This Sustainability Report 2020 references the following Disclosures from the GRI Topic-specific Standards presented in the table. All other standards except Water and Effluents (GRI 303), Waste (GRI 306), Occupational Health and Safety (GRI 403) and Tax (GRI 207) follow version 2016. Standards GRI 303 and GRI 403 follow version 2018. Standard GRI 207 follows version 2019. Standard GRI 306 follows version 2020.

The table includes Disclosures reported in full or partly. Due to the consolidation of Uniper, some Disclosures are reported only partly.

DISCLOSURE	DESCRIPTION	SECTION
GRI 103: MANAGEMENT APPROACH		
103-1	Explanation of the material topics	<ul style="list-style-type: none"> ▶ Sustainability at Fortum / Sustainability priorities ▶ Governance and management / Sustainability management by topic <p>Additionally reported by topic</p>
103-2	The management approach and its components	<ul style="list-style-type: none"> ▶ Governance and management ▶ Policies and commitments ▶ Governance and management / Sustainability management by topic ▶ Sustainability at Fortum / Business ethics and compliance ▶ Climate and resources / Emissions / Environmental non-compliances ▶ Personnel and society / Human rights
103-3	Evaluation of the management approach	<ul style="list-style-type: none"> ▶ Governance and management / Sustainability management by topic <p>Additionally reported by topic</p>
ECONOMIC RESPONSIBILITY		
GRI 201: Economic performance		
201-1	Direct economic value generated and distributed	<ul style="list-style-type: none"> ▶ Personnel and society / Stakeholders / Economic impacts
201-2	Financial implications and other risks and opportunities due to climate change	<ul style="list-style-type: none"> ▶ Climate and resources / Climate ▶ Financials 2020 / Operating and financial review / Risk management
201-3	Defined benefit plan obligations and other retirement plans	<ul style="list-style-type: none"> ▶ Financials 2020 / Notes to the consolidated financial statements / 30 Pension obligations
GRI 205: Anti-corruption		
205-1	Operations assessed for risks related to corruption	<ul style="list-style-type: none"> ▶ Sustainability at Fortum / Business ethics and compliance
205-2	Communication and training about anti-corruption policies and procedures	<ul style="list-style-type: none"> ▶ Sustainability at Fortum / Business ethics and compliance
205-3	Confirmed incidents of corruption and actions taken	<ul style="list-style-type: none"> ▶ Sustainability at Fortum / Business ethics and compliance

DISCLOSURE	DESCRIPTION	SECTION
GRI 206: Anti-competitive Behavior		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	<ul style="list-style-type: none"> ▶ Sustainability at Fortum / Business ethics and compliance
GRI 207: Tax		
207-1	Approach to tax	<ul style="list-style-type: none"> ▶ Tax principles
207-2	Tax governance, control, and risk management	<ul style="list-style-type: none"> ▶ Tax footprint 2020 ▶ Financials 2020 / Operating and financial review / Risk Management ▶ SpeakUp channel ▶ Financials 2020 / Auditor's report
207-3	Stakeholder engagement and management of concerns related to tax	<ul style="list-style-type: none"> ▶ Tax footprint 2020 ▶ SpeakUp channel
Nuclear plant decommissioning		
103	Management Approach	<ul style="list-style-type: none"> ▶ Financials 2020 / Notes to the consolidated financial statements / 28 Nuclear related assets and liabilities
System efficiency		
EU11	Average generation efficiency of thermal plants	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Fuel consumption / Energy intensity
ENVIRONMENTAL RESPONSIBILITY		
GRI 301: Materials		
301-1	Materials used by weight or volume	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Fuel consumption
301-2	Recycled input materials used	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Fuel consumption ▶ Climate and resources / Circular economy
GRI 302: Energy		
302-1	Energy consumption within the organisation	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Energy production ▶ Climate and resources / Energy / Fuel consumption
302-3	Energy intensity	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Fuel consumption / Energy intensity
302-4	Reduction of energy consumption	<ul style="list-style-type: none"> ▶ Climate and resources / Energy / Energy efficiency

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DISCLOSURE	DESCRIPTION	SECTION
GRI 303: Water and effluents		
303-1	Interactions with water as a shared resource	▶ Climate and resources / Water ▶ Personnel and society / Corporate citizenship
303-3	Water withdrawal	▶ Climate and resources / Water
303-4	Water discharge	▶ Climate and resources / Water ▶ Climate and resources / Emissions / Emissions to water ▶ Climate and resources / Emissions / Environmental non-compliances
303-5	Water consumption	▶ Climate and resources / Water
GRI 304: Biodiversity		
304-3	Habitats protected or restored	▶ Climate and resources / Biodiversity
GRI 305: Emissions		
305-1	Direct (Scope 1) GHG emissions	▶ Climate and resources / Climate / Greenhouse gas emissions
305-2	Energy indirect (Scope 2) GHG emissions	▶ Climate and resources / Climate / Greenhouse gas emissions
305-3	Other indirect (Scope 3) GHG emissions	▶ Climate and resources / Climate / Greenhouse gas emissions
305-4	GHG emissions intensity	▶ Climate and resources / Climate / Metrics and targets
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	▶ Climate and resources / Emissions / Emissions to air
GRI 306: Waste		
306-1	Waste generation and significant waste-related impacts	▶ Climate and resources / Circular economy
306-3	Waste generated	▶ Climate and resources / Circular economy / Waste and by-products of our energy production
306-4	Waste diverted from disposal	▶ Climate and resources / Circular economy / Waste and by-products of our energy production
306-5	Waste directed to disposal	▶ Climate and resources / Circular economy / Waste and by-products of our energy production
GRI 307: Environmental Compliance		
307-1	Non-compliance with environmental laws and regulations	▶ Sustainability at Fortum / Business ethics and compliance ▶ Climate and resources / Emissions / Environmental non-compliances
GRI 308: Supplier Environmental Assessment		
308-2	Negative environmental impacts in the supply chain and actions taken	▶ Personnel and society / Supply chain / Sustainable supply chain

DISCLOSURE	DESCRIPTION	SECTION
SOCIAL RESPONSIBILITY		
102-8	Information on employees and other workers	▶ Personnel and society / Personnel
102-41	Collective bargaining agreements	▶ Personnel and society / Personnel / Employee-employer relations
GRI 401: Employment		
401-1	New employee hires and employee turnover	▶ Personnel and society / Personnel
GRI 403: Occupational Health and Safety		
403-1	Occupational health and safety management system	▶ Personnel and society / Safety and security / Occupational and operational safety
403-2	Hazard identification, risk assessment, and incident investigation	▶ Personnel and society / Safety and security / Occupational and operational safety
403-3	Occupational health services	▶ Personnel and society / Personnel / Employee health and wellbeing
403-5	Worker training on occupational health and safety	▶ Personnel and society / Safety and security / Occupational and operational safety
403-6	Promotion of worker health	▶ Personnel and society / Personnel / Employee health and wellbeing
403-9	Work-related injuries	▶ Personnel and society / Safety and security / Occupational and operational safety
403-10	Work-related ill health	▶ Personnel and society / Personnel / Employee health and wellbeing
GRI 404: Training and Education		
404-2	Programs for upgrading employee skills and transition assistance programs	▶ Personnel and society / Personnel / Employee development
404-3	Percentage of employees receiving regular performance and career development reviews	▶ Personnel and society / Personnel / Employee development
GRI 405: Diversity and Equal Opportunity		
405-1	Diversity of governance bodies and employees	▶ Personnel and society / Personnel / Diversity and equal opportunity ▶ Governance / Corporate Governance Statement / Board of Directors
405-2	Ratio of basic salary and remuneration of women to men	▶ Personnel and society / Personnel / Rewarding

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DISCLOSURE	DESCRIPTION	SECTION
GRI 406: Non-discrimination		
406-1	Incidents of discrimination and corrective actions taken	▶ Personnel and society / Personnel / Diversity and equal opportunity
GRI 407: Freedom of Association and Collective Bargaining		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	▶ Personnel and society / Personnel / Employee-employer relations ▶ Personnel and society / Supply chain / Sustainable supply chain
GRI 408: Child Labor		
408-1	Operations and suppliers at significant risk for incidents of child labour	▶ Personnel and society / Human rights
GRI 409: Forced or Compulsory Labor		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	▶ Personnel and society / Human rights
GRI 412: Human Rights Assessment		
412-1	Operations that have been subject to human rights reviews or impact assessments	▶ Personnel and society / Human rights
412-2	Employee training on human rights policies or procedures	▶ Personnel and society / Human rights
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	▶ Personnel and society / Human rights
GRI 413: Local Communities		
413-2	Operations with significant actual and potential negative impacts on local communities	▶ Personnel and society / Corporate citizenship
GRI 414: Supplier Social Assessment		
414-2	Negative social impacts in the supply chain and actions taken	▶ Personnel and society / Supply chain / Sustainable supply chain
GRI 415: Public Policy		
415-1	Political contributions	▶ Sustainability at Fortum / Business ethics and compliance

DISCLOSURE	DESCRIPTION	SECTION
GRI 417: Marketing and Labeling		
417-3	Incidents of non-compliance concerning marketing communications	▶ Personnel and society / Customers / Product responsibility
GRI 419: Socioeconomic Compliance		
419-1	Non-compliance with laws and regulations in the social and economic area	▶ Sustainability at Fortum / Business ethics and compliance ▶ Personnel and society / Personnel / Diversity and equal opportunity ▶ Personnel and society / Human rights ▶ Personnel and society / Customers / Product responsibility
Disaster/Emergency planning and response		
103	Management Approach	▶ Personnel and society / Safety and security / Corporate security
Access		
EU30	Average plant availability factor	▶ Climate and resources / Energy / Security of supply

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Limited assurance report on GHG emissions

Independent limited assurance report on Fortum's Greenhouse Gas Emissions 2020

To the Management of Fortum Corporation

We have been engaged by Fortum Corporation (hereafter: Fortum) to provide a limited assurance on Fortum's selected Greenhouse Gas Emissions disclosures (Scope 1, 2 and 3) based on Fortum's Reporting principles according to the requirements published by CDP (Verification of Climate Data) for the reporting period of January 1, 2020 to December 31, 2020 (hereafter: GHG Emissions Disclosures). The disclosures subject to the assurance engagement is presented on pages 37–38 in the section "Climate" of Fortum's Sustainability Reporting 2020 (hereafter: GHG Reporting).

Management's responsibility

Management is responsible for the preparation of the GHG Reporting in accordance with the reporting criteria as set out in Fortum's Reporting principles and the Greenhouse Gas Protocol (hereafter: Reporting criteria). This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and fair presentation of the GHG Reporting that are free from material misstatement, whether due to fraud or error, selecting and applying appropriate criteria and making estimates that are reasonable in the circumstances.

Assurance provider's responsibility

Our responsibility is to express a limited assurance conclusion on the reported GHG Emissions Disclosures within Fortum's GHG Reporting based on our engagement. Our assurance report is made in accordance with the terms of our engagement with Fortum. We do not accept or assume responsibility to anyone other than Fortum for our work, for this assurance report, or for the conclusions we have reached.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3410 to provide a limited assurance on GHG Emissions Disclosures. This Standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain a limited assurance whether any matters come to our attention that cause us to believe that

the GHG Emissions Disclosures have not been presented, in all material respects, in accordance with the reporting criteria.

We did not perform any assurance procedures on the prospective information, such as targets, expectations and ambitions. Consequently, we draw no conclusion on the prospective information.

A limited assurance engagement with respect to the GHG Emissions Disclosures involves performing procedures to obtain evidence about the reported GHG Emissions. The procedures performed depend on the practitioner's judgment, but their nature is different from, and their extent is less than, a reasonable assurance engagement. It does not include detailed testing of source data or the operating effectiveness of processes and internal controls and consequently they do not enable us to obtain the assurance necessary to become aware of all significant matters that might be identified in a reasonable assurance engagement.

Our procedures on this engagement included:

- A review of management systems, reporting and data compilation processes related to the calculations presented on pages 37 and 38 in the Fortum's Sustainability Reporting 2020.
- Selected interviews of persons conducting Scope 1, 2 and 3 analysis and data owners
- Review of assumptions and emission factors used in calculations
- Analytical testing of consolidated data
- Testing of source data on spot check basis

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

Our independence, quality control and competences

We complied with Deloitte's independence policies which address and, in certain cases, exceed the requirements of the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants in their role as independent assurance providers and in particular preclude us from taking financial, commercial, governance and ownership positions which might affect, or be perceived to affect,

our independence and impartiality and from any involvement in the preparation of the report. We have maintained our independence and objectivity throughout the year and there were no events or prohibited services provided which could impair our independence and objectivity.

Deloitte Oy applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. This engagement was conducted by a multidisciplinary team including assurance and GHG Reporting expertise with professional qualifications. Our team is experienced in providing reporting assurance.

Conclusion

On the basis of the procedures we have performed, nothing has come to our attention that causes us to believe that the information subject to the assurance engagement is not prepared, in all material respects, in accordance with the Reporting criteria.

Our assurance statement should be read in conjunction with the inherent limitations of accuracy and completeness of the GHG Reporting.

Helsinki 23 April 2021
Deloitte Oy

Jukka Vattulainen
Authorized Public Accountant

Teemu Jaatinen
Authorized Public Accountant