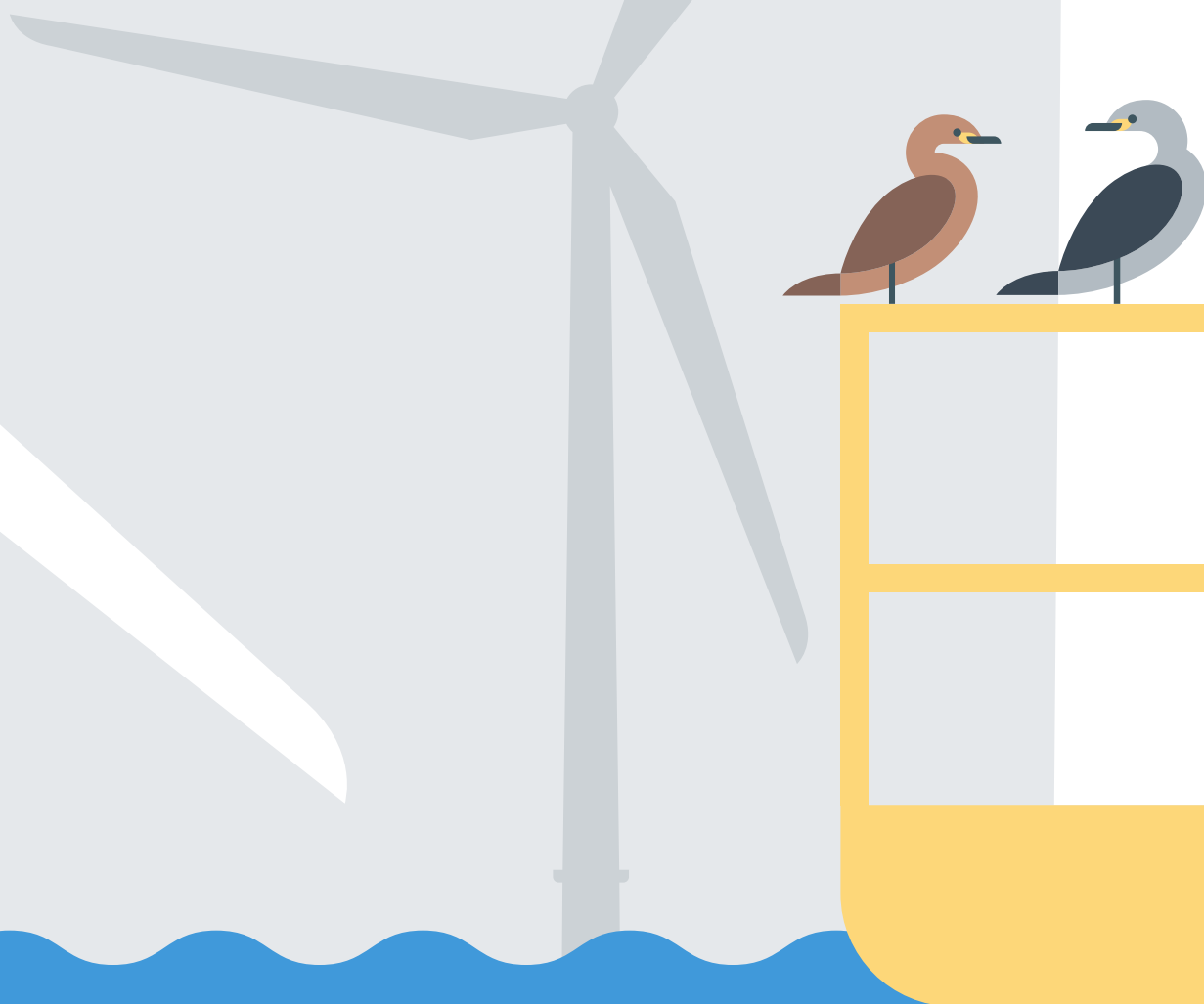


# Carbon neutral to stop global warming at 1.5°C



**Ørsted**  
Sustainability report  
2019



We cannot tell our grandchildren that we failed to protect the planet because we were too focused on protecting our own well-being. We must act now.

Henrik Poulsen  
CEO, Ørsted

Speech at the United Nations Climate Action Summit  
UN General Assembly Hall, New York City, 23 September 2019



We have systematically assessed our impact on the Sustainable Development Goals (SDGs). Our main contributions are on 'Clean and affordable energy' and 'Climate action' (SDGs 7 and 13). We report on our contribution to the SDGs on pages 32-47.

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Factual statements in this report are mainly based on the following sources:  
**BNEF** Bloomberg New Energy Finance    **IPCC** Intergovernmental Panel on Climate Change  
**IEA** International Energy Agency    **IRENA** International Renewable Energy Agency



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.

This report constitutes Ørsted's compliance with the statutory disclosure on corporate social responsibility, see the Danish Financial Statements Act, section 99a. For the gender distribution of management and compliance with section 99b, see our ESG performance report 2019.

# We are in the business of halting climate change

Our transformation from fossil fuels to green energy has not been easy, but it has been necessary to leave behind a dying business model based on fossil fuels. Instead, we have created a leading global green energy business.

Ørsted's vision is a world that runs entirely on green energy. We develop, construct and operate offshore and onshore wind farms, solar farms and energy storage facilities, bioenergy plants, and provide energy products to our customers.

Over the past decade, we have been on a major decarbonisation journey to transform from one of Europe's most carbon-intensive energy companies to a

global leader in renewable energy. We have reduced our carbon emissions by 86% compared to 2006, and in January 2020, we were ranked the most sustainable company in the world.

We have decided that by 2025, we will be carbon neutral in scope 1-2, and by 2040, we aim to become carbon neutral across our entire carbon footprint (scope 1-3)<sup>1</sup>.



## 2009

In 2009, we formulated a vision of transforming our business from fossil fuels to green energy. Our vision was for 85% of our energy generation to come from renewable sources by 2040 compared to 15% in 2006. That vision was radical at the time.

## 2013

In 2013, we reinforced our energy generation carbon-reduction target for 2020 from 320g CO<sub>2</sub>/kWh (31%) to 260g CO<sub>2</sub>/kWh (44%) compared to 2006. We also focused our portfolio of green energy technologies on our core competency, offshore wind, increased our investments in green energy, and set a target for reducing the cost of offshore wind by 35-40% in 2020 compared to 2012.

## 2016-17

Already by 2016, the cost of offshore wind was reduced by 60% and our carbon emissions from energy generation were reduced to 224g CO<sub>2</sub>/kWh (52% reduction from 2006). Our carbon reductions were primarily driven by a 73% reduction in our coal consumption from 2006 due to closing three coal-fired combined heat and power plants as well as conversions of plants to run on sustainable biomass. Late 2016, we set the target to only source certified sustainable wooden biomass for our CHP plants by 2020.

In 2017, we decided to completely phase out our use of coal by 2023. We also divested our oil and gas business and renamed the company from DONG Energy to Ørsted. The vision for Ørsted is a world that runs entirely on green energy, and we focused our entire investment programme on green energy.

## 2019

By the end of 2019, we had realised an 86% carbon reduction since 2006, and 86% of the energy we generated came from renewable sources. In just ten years, we met the transformation target we defined for 2040.

We had installed 9.9GW renewable capacity, enough to power more than 15 million people. We had reduced our coal consumption by 91%, and 96% of the wooden biomass we sourced was certified sustainable biomass.

In 2019, we adopted three new climate targets to guide our continued decarbonisation journey.

## 2025

**By 2025, we will be carbon neutral (scope 1-2).**

This target covers all Ørsted's direct greenhouse gas emissions from our energy generation, operations and administration (scope 1) and indirect emissions from our energy consumption (scope 2). We will achieve this by reducing our carbon emissions by at least 98% since 2006. For the remaining emissions, we will continue to investigate solutions, which could include investing in certified carbon removal projects.

In meeting this reduction target, the Science Based Targets initiative (SBTi) has preliminarily concluded that we deliver on the reduction requirements for energy generation more than two decades faster than climate science has defined as necessary to halt global warming at 1.5°C<sup>2</sup>.

By 2025, we aim to have installed at least 20GW of renewable energy, 15GW from offshore wind and 5GW from onshore renewables, enough to power 35 million people. By 2025, we also target 100% electric vehicles in our company fleet.

## 2030-32

Our ambition is to have built more than 30GW of green energy across technologies by 2030, powering more than 55 million people with green energy.

**By 2032, we target to reduce indirect carbon emissions from our supply chain and energy trading (scope 3) by 50%.**

As a consequence, we align the carbon reductions across our entire carbon footprint (scope 1-3) with the 1.5°C pathway.

## 2040

Science requires the world to achieve net-zero carbon emissions by 2050 at the latest to stop global warming at 1.5°C.

**We want to reach carbon neutrality in our total carbon footprint (scope 1-3) already by 2040.**

<sup>1</sup> For a detailed overview and elaboration of our carbon emissions sources and scopes, please go to pages 12-13.

<sup>2</sup> To learn more about SBTi's assessment of our carbon-reduction targets, please go to pages 14-15.

# Let's act now to stay within 1.5°C

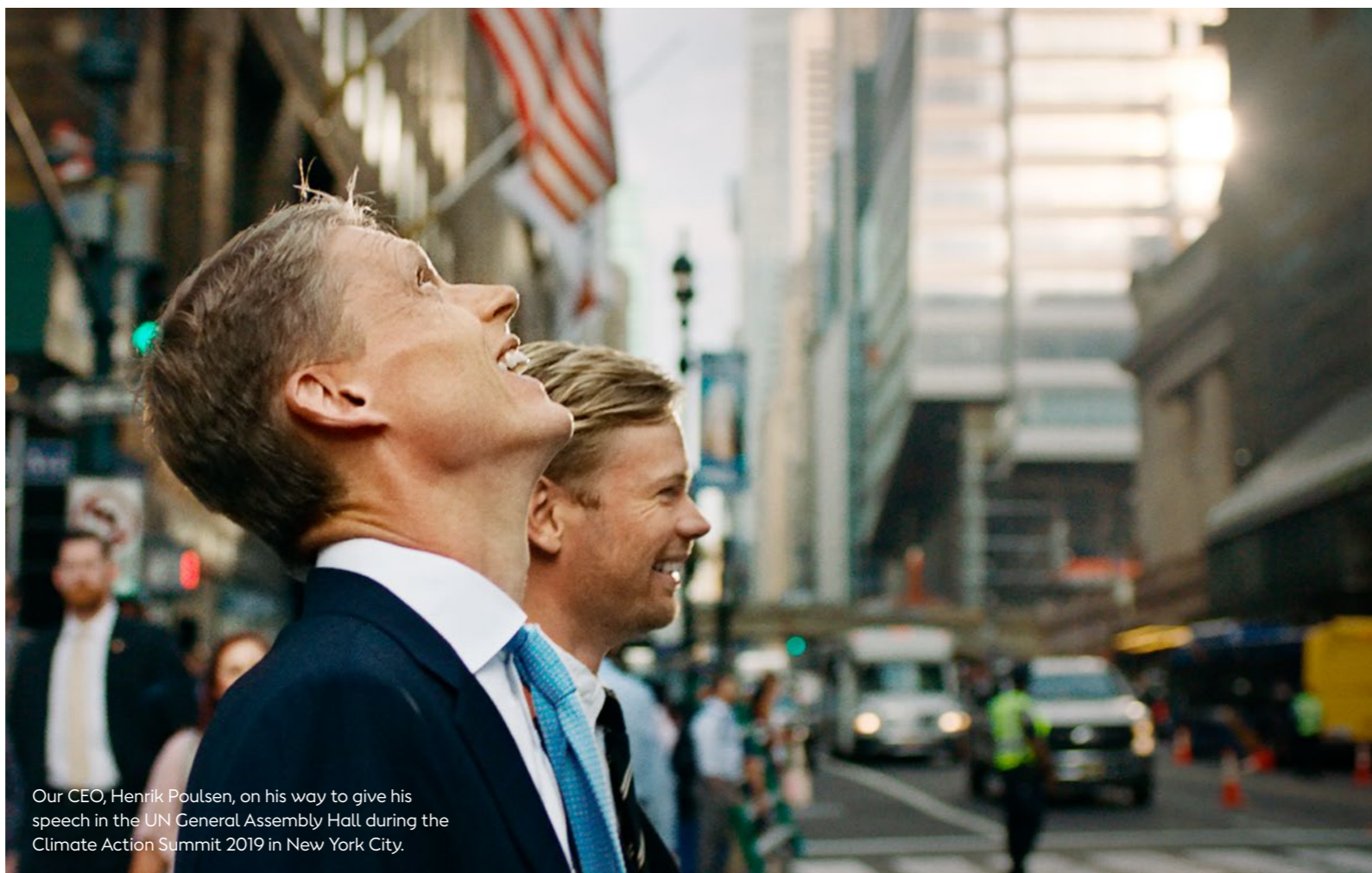
The world is facing a climate emergency. Scientists have clearly demonstrated the need to limit global warming to 1.5°C to protect life on Earth, our shared home. Going above that threshold is likely to trigger irreversible consequences for nature and humans. To stay within 1.5°C global warming by 2100, the world needs to halve global carbon emissions by 2030 and reduce emissions to net-zero by 2050 at the latest.

Yet global emissions continue to rise, and currently, they show no sign of peaking within the next decade. Based on the policies currently set by governments, the UN expects the global average temperature to increase by 1.5°C above the pre-industrial level as soon as 2030 and by 3-4°C by 2100. Climate change is moving much faster than global decisions to decarbonise, and the world is short on time. We must act now to avoid catastrophic climate change.

## A world that runs entirely on green energy is both necessary and possible

73% of global emissions come from energy due to the burning of fossil fuels for power, heat, cooling, transport, and industrial processes. To reduce emissions, the most important action is to rapidly transform the production and use of energy from fossil fuels to renewable energy. And it can be done.

The green energy technologies which we need to transform our production and use of energy away from fossil fuels are already at our disposal, and in two thirds of the world, new-built renewable energy from wind and solar is now cheaper than new coal, gas, and nuclear plants.



Our CEO, Henrik Poulsen, on his way to give his speech in the UN General Assembly Hall during the Climate Action Summit 2019 in New York City.

## We need unprecedented action

At COP26 in November 2020, world leaders will take stock of progress for the first time since the Paris Agreement and announce their plans to cut emissions further. According to the latest Emissions Gap report from the UN Environment Programme, the 1.5°C limit is close to slipping out of reach.

To get on the right track, the world needs to double the build-out rate of green energy, triple the retirement rate of coal-fired power plants and intensify green electrification of transport, buildings, and industry. We also need to increase energy efficiency to avoid driving up energy demand more than needed. We need bold decisions and unprecedented action at

all levels of society, from politicians, businesses, investors, and down to every one of us to preserve our home, planet Earth, for current and future generations.

To limit climate change and transform the global energy system from fossil fuels to green energy, governments and businesses must work together. Gov-

ernments need to set ambitious and binding targets, and businesses must take responsibility for decarbonising their carbon footprints in line with science and to deploy sustainable solutions at scale.

## Our carbon neutral strategy

At Ørsted, our vision is a world that runs entirely on green energy. We want to help speed up green action globally and transform the world's energy systems.

During the last decade, we have transformed our business from fossil fuels to green energy. We have reduced our carbon emissions decades faster than climate science has defined as necessary to halt global warming at 1.5°C. By the end of 2019, we had reduced emissions by 86% compared to 2006.

We are determined to continue to reduce our emissions, and we have therefore decided that by 2025, we want to be carbon neutral. We will achieve this through at least 98% emissions reduction in the carbon intensity of our energy generation, operations and administration (scope 1) and energy consumption (scope 2) compared to 2006. We already have a number of actions defined to reduce emissions. In 2020, we will inaugurate the world's biggest offshore wind farm, Hornsea 1, in the UK, capable of powering well over 1 million households. In 2021, our combined solar and storage project Permian Energy Center will deliver its first power. By 2023, we will have phased out coal completely. And by 2025, our fleet of vehicles will be 100% electric.

The remaining emissions beyond 98% come from a variety of sources, where emissions are hard to abate. Still, we will strive to push the reduction beyond 98% and look for solutions to the remaining emissions, which could include offset through certified carbon removal projects.

We also embark on the next phase in our decarbonisation journey to address the carbon emissions across our entire carbon footprint and align these emissions with the 1.5°C pathway. We have therefore set a target to reduce emissions from our supply chain and energy trading activities (scope 3) by 50% in 2032. To meet this target, we will grad-

ually phase out trading of natural gas and work with our strategic suppliers to decarbonise our supply chain.

We target net-zero emissions in our total carbon footprint by 2040, a decade faster than science demands. It is an ambitious target that we believe will help foster innovation across the renewable energy supply chain and deliver the scalable carbon neutral solutions that are urgently needed to halt the climate emergency.

## Our commitment to sustainability

The UN Sustainable Development Goals set a global ambition for the sustainable development of the world towards 2030. Ørsted is deeply committed to advancing the SDGs. Our biggest contribution is our actions to help fight climate change. In addition, it is imperative for us to do our part in ensuring that the global green energy transformation takes place sustainably to advance the benefits for all life on our planet. As an active member of the UN Global Compact, we are committed to ensure that we advance our positive contributions to society and nature and mitigate potential adverse impacts. We want to conduct our business in a responsible way that adheres to the principles on human rights and a socially just transition.

In January 2020, Ørsted was ranked the world's most sustainable company by Corporate Knights. We are proud and humbled to receive this recognition, and it strengthens our determination to do what we can to help speed up green action globally. We need to act now to halt the climate emergency. It will not be easy, but it is necessary. I urge everyone to take decisive action now and to do their part to maintain a habitable planet for current and future generations.

Henrik Poulsen  
CEO, Ørsted

# Global carbon emissions must be halved by 2030

Worldwide, people demand action to halt the climate emergency.

The world is facing a man-made climate emergency with severe consequences for nature and humans. Global carbon emissions continue to rise despite clear scientific evidence that global emissions must be halved already by 2030. We need to act now to sustain life on Earth as we know it.

Scientific reports continue to reaffirm the importance of keeping the average global temperature increase at a maximum of 1.5°C. To succeed, emissions need to be cut in half by 2030 and reach net-zero by 2050 at the latest. Yet global emissions continue to rise and show no signs of peaking. In 2019, annual global greenhouse gas emissions reached an estimated 56 gigatonnes, the highest level ever recorded and up by 43% since 2000.

Going past the threshold of 1.5°C is likely to lead to a cascade of catastrophic events that will accelerate the release of carbon and other greenhouse gases into the atmosphere and therefore also global warming. This includes the melting of permafrost, fires that turn forests from carbon sinks into carbon sources, and ocean acidification that inhibits the ability of oceans to sequester carbon.

If the world does not take action to halt global warming, the regional effects of climate change that we already experience will disperse and become global challenges towards 2100. According to the IPCC, the frequency, duration, and intensity of severe weather events will go

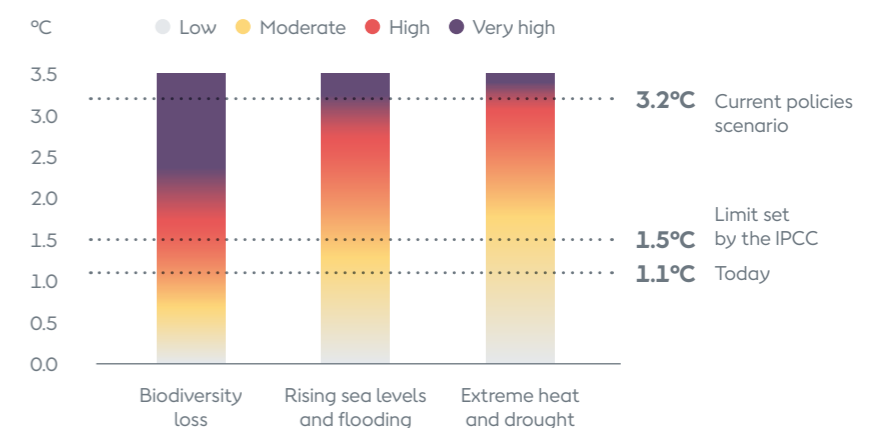
up. In some areas, droughts and wildfires will result in the irreparable loss of habitats and species, in others increased precipitation will flood homes, infrastructure, and land. Sea levels will rise and make an estimated 40 million people that today are safe exposed to coastal flooding.

The world needs to urgently speed up green action to sustain life on Earth as we know it.

**Overshooting the 1.5°C limit will imply that climate impacts go from destructive to catastrophic.**

**Sebastian Mernild**  
IPCC Lead Author  
6<sup>th</sup> Assessment Report (due in 2022)

## Impacts on ecosystems due to higher global average temperatures



Source: IPCC (2018) 1.5 Special Report, Global Warming of 1.5°C

# It is necessary and possible to create a world that runs entirely on green energy

The energy system needs to change at an unprecedented scale and pace. The world must urgently speed up the transformation from fossil fuels to green energy, and the technologies needed to do so are already available.

The key to halting global warming is to transform global energy systems from fossil fuels to renewable energy. Emissions from fossil fuel-based energy constitute 73% of global carbon emissions, according to the Climate Analysis Indicator Tool. The emissions come from the energy used in power and heat generation, cooling systems, transport, and industrial processes.

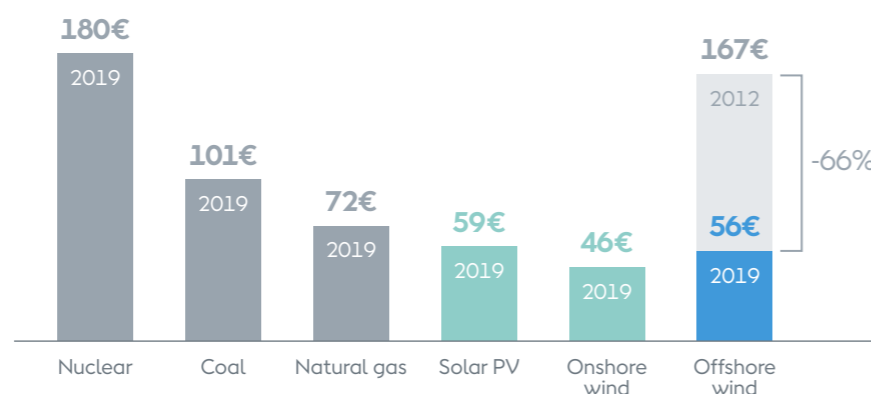
The challenge is that the build-out of renewable energy is not happening nearly fast enough. Today, green energy makes up approx 14% of the global energy supply and is projected to reach around 18% by 2030. However, according to the IPCC, 28% of global energy supply must come from renewables by 2030.

## The world has the solutions to transform to green energy

Transforming to green energy is no longer a question of technical feasibility or financial viability. The technologies needed to transition to a green and reliable energy system are already being implemented today at scale and at a global level. Wind and solar energy have been through a rapid evolution and are now cheaper than new-built coal or gas capacity in two thirds of the world, according to BNEF. An example of the rapid cost reductions in renewable energy is offshore wind with a 66% drop in costs since 2012.

## Newly built green energy has become cheaper than energy from fossil fuels

Levelised cost of electricity for different energy sources (EUR/MWh)  
2018 prices, North-western Europe



## Levers to transform to green energy

To decarbonise the global energy system and align with the 1.5°C pathway, the world will need urgent action in four major areas:

### 1. Intensify green electrification

As green power has reached cost competitive levels, it is projected that green power will be the main energy carrier in transforming the global energy systems from fossil fuels to green. It requires intensified electrification of sectors like transport and buildings. Today, power only accounts for 20% of all energy use, but this could increase to 50% in 2050 through intensified electrification, according to IRENA and IPCC.

### 2. Phase out fossil fuels

Fossil fuels currently constitute approx 80% of the global energy mix. The most carbon-intensive fuel is coal. In the global power sector, it accounts for 72% of emissions. Projections for 2030 show that the global coal-fired power generation capacity will remain roughly the same as today. The world needs to triple the retirement of coal-fired power plants to align with the 1.5°C scenario.

### 3. Scale up green power deployment

To meet the world's energy demand while cutting emissions in half by 2030, the build-out of green power generation capacity must be accelerated drastically. In 2018, 1,275GW of green power capacity was installed globally, including solar and wind. Still, the world will need to double the planned build-out of green power by 2030 compared to current plans, according to IRENA estimates.

### 4. Increase energy efficiency

Global population is expected to increase by two billion people by 2050 with more people being lifted into the global middle class, causing energy demand to grow a projected 24% when instead it needs be kept more or less at the same level as today. Substantial improvements in energy efficiency, particularly in buildings, is a key lever to limit the global increase in energy demand.

# Our green energy solutions displace carbon emissions

Ørsted has three decades of experience in building renewable energy and is today among the world's leading renewable energy companies with a broad range of solutions to help decarbonise the world's energy systems.

Offshore wind, onshore wind, and solar PV are expected to be cornerstone technologies in the global green energy transformation, according to IEA.

All three technologies are at the core of the green solutions that we provide to help countries transition to green energy.

Our green energy solutions help avoid carbon emissions by displacing fossil fuels from the energy mix. In 2019, we have helped avoid 11.3 million tonnes of carbon emissions, compared to 8.1 million tonnes in 2018<sup>1</sup>. This is equal to removing more than 5.7 million cars from the street for a year.

Avoided  
**11.3** million tonnes of emissions

That is equal to removing  
**5.7** million cars

## Our green energy solutions

### Offshore wind

A fundamental technology in the future energy system due to its stable production patterns. The technology takes advantage of the powerful and abundant wind at sea. It is deployable at large scale and is especially useful for powering areas with high population density. It has the potential to be the backbone of the global green energy transformation, according to the IEA and the European Commission's estimate that in Europe alone, it is feasible to scale up the deployment of offshore wind from 20GW today to 450GW by 2050.

### Onshore wind

Currently the most price-competitive renewable energy source. While wind conditions are less favourable on land than at sea, the maturity of this technology makes it deployable globally, ideally in regions with large uninhabited areas of land.

### Solar PV

One of the most mature and fastest-growing renewable energy technologies. It is particularly useful in countries with strong solar energy resources, and it can be deployed on both large and small scale, which is key to provide power in many areas across the globe.

### Storage

Batteries add short-term storage capacity and flexibility to the grid, which is a key tool to help balance short term fluctuations in the power supply from wind and solar with power demand.

### Hydrogen

Through electrolysis of water, excess electricity can be converted into green hydrogen and derived fuels. This has the potential to replace the fossil fuels used in heavy industries and transport, which are hard to convert to green power.

### Sustainable biomass

Useful for converting coal-fired power plants to green capacity. Mainly relevant for combined heat and power (CHP) plants where electrified cost competitive alternatives are not available, and only if the biomass is certified sustainable.

It is not part of our strategy to build new biomass-fired CHP plants. Read more on page 18.

<sup>1</sup> In our ESG performance report 2019, page 19, we elaborate on the methodology for calculating avoided emissions. Please read more in the section 'Accounting policies'.



# Our targets to align with 1.5°C

We are decarbonising our energy generation decades faster than what science requires from the energy sector. We now expand the scope and ambition of our decarbonisation strategy. By 2025, we want to be carbon neutral. In addition, we will halve emissions from our supply chain and energy trading activities to align our total carbon footprint with science. This chapter tells you how.

A decade ago, Ørsted emitted 12 million tonnes of CO<sub>2</sub>e, primarily coming from the use of coal at our combined heat and power plants. Through a combination of coal-to-biomass conversions and offshore wind build-out, we have significantly reduced the emissions from our energy generation. We are determined to continue to drive out emissions, and we have therefore decided to strengthen the ambition and scope of our decarbonisation strategy.

## Carbon neutral energy generation and operations

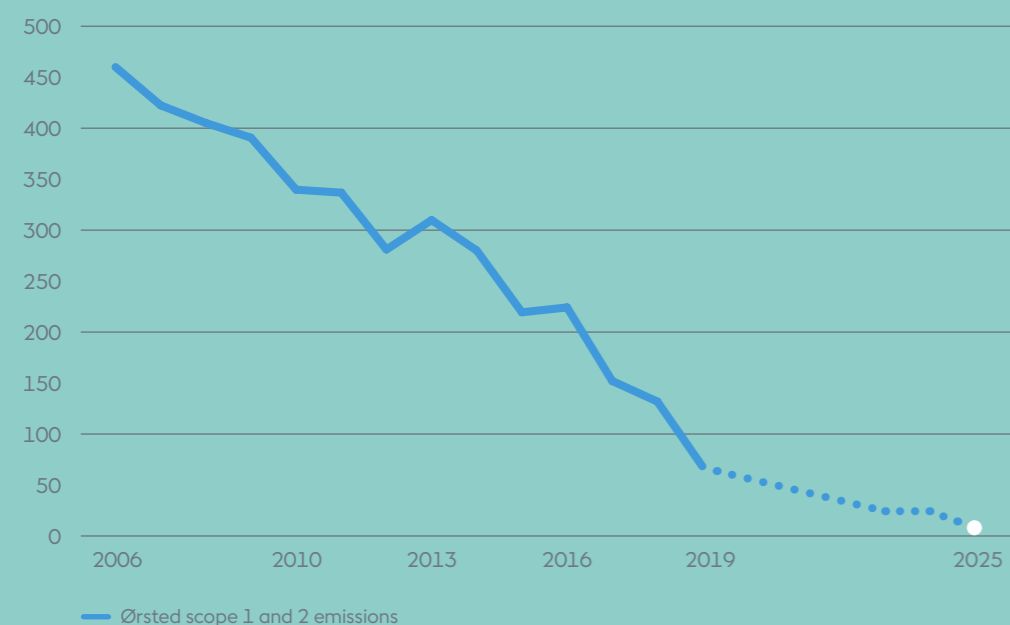
By 2025, we will be carbon neutral. Our planet needs actual reductions in the carbon emitted to the atmosphere. We have already reduced our emissions from 18 to 2 million tonnes between 2006 and 2019. Relative to the amount of energy we generate, also referred to as the carbon intensity of our business, it is a reduction of 86%<sup>1</sup>. To become

carbon neutral by 2025, we will continue our efforts to reduce our direct emissions. We want to achieve at least 98% reduction in the carbon intensity of our energy generation, operations and administration (scope 1) and energy consumption (scope 2). This emissions reduction trajectory is more than two decades ahead of what science demands from energy companies to keep global warming below 1.5°C.

## Carbon neutral by 2025

### Energy generation and operations (scope 1-2)

g CO<sub>2</sub>e/kWh



By 2025, we want to be carbon neutral. This target covers all direct emissions from our activities and indirect emissions from our energy consumption (scope 1-2).

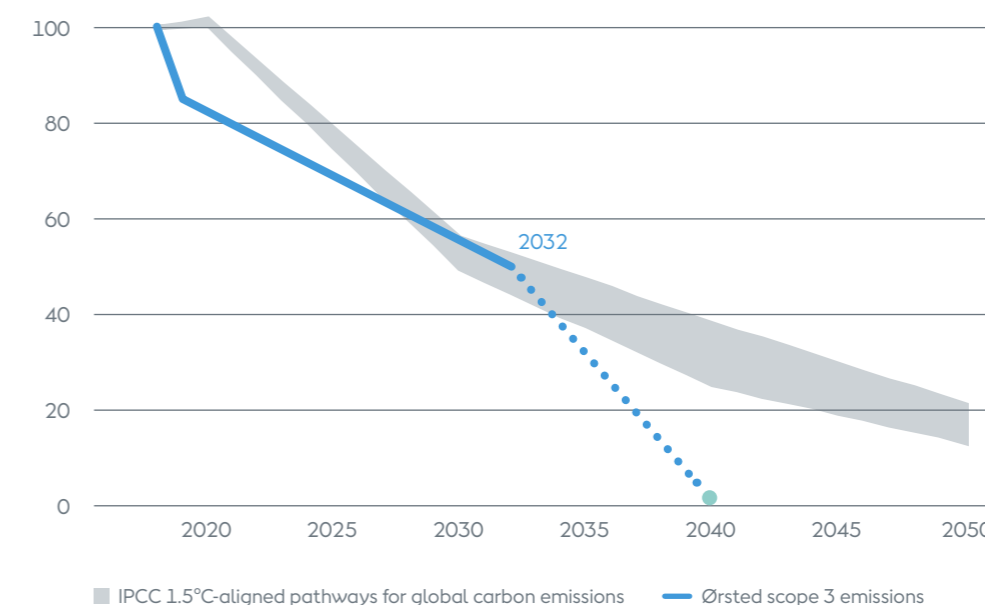
● We will eliminate the remaining emissions beyond a 98% reduction (g CO<sub>2</sub>e/kWh) which could include offset by investing in certified carbon-removal projects.

<sup>1</sup> Our absolute carbon emissions reduction is 89% which is slightly larger than the reduction per kWh energy generated, as our annual generation of heat and power has decreased since 2006.

## 50% carbon reduction in 2032 towards carbon neutrality in 2040

### Supply chain and energy trading (scope 3)

Per cent



By 2032, we target to halve all emissions in our supply chain and related to our energy trading (scope 3) compared to 2018.

● Our ambition is that by 2040, our entire carbon footprint (scope 1-3) should be carbon neutral.

The main actions to reach a 98% reduction are, firstly, to continue to expand our renewable generation capacity – building more green energy reduces the carbon intensity of each kWh we generate. Secondly, to complete our phase-out of coal as an energy source at our Danish combined heat and power plants, and by ceasing to use coal in 2023.

### From 98% reduction to carbon neutral

The remaining emissions beyond 98% reduction come from a variety of sources in our energy generation and company operations, where it is particularly challenging to drive out emissions. The majority comes from the natural gas we still use at our combined heat and power plants and from fossil fuel used for our offshore operation vessels. Still, we will strive to push our reduction beyond 98% towards 2025. Already in 2019, we launched a number of actions to do so, including carbon neutral offshore operation logistics and 100% electric vehicles by 2025.

For the remaining emissions, we will continue to investigate solutions, which could include investing in certified carbon removal projects. According to the IPCC, nature-based offset solutions are going

to be central to realise a carbon neutral world by 2050 at the latest, as the world will not be able to realise enough carbon reductions in time. Should offsetting become necessary, we will ensure that we only engage with projects that are verified, measurable and additional, meaning that the carbon-removal would not have happened without our engagement.

### Reducing emissions in our supply chain and related to our energy trading

Being on track to carbon neutral energy generation and operations, we also turn our attention to the indirect emissions outside of our immediate control that mainly come from our supply chain and energy trading (scope 3). In 2019, these emissions accounted for 34,604kt CO<sub>2</sub>e.

We have set a target to reduce all indirect emissions from our supply chain and energy trading by 50% between 2018 and 2032. This is an important step towards realising that our entire carbon footprint is carbon neutral by 2040, a decade faster than required by science to stop global warming at 1.5°C.

Most of our indirect emissions are related to energy trading and come from the

production and end use of the natural gas we sell to wholesale markets. To reduce these emissions, we will gradually reduce our natural gas trading activities.

The second-largest source of indirect emissions come from our offshore wind business supply chain. To reduce these, we have launched a programme to engage with suppliers to decarbonise the manufacturing and installation of offshore wind farm components and vessel services.

### The science-based approval

We have defined our carbon-reduction targets to align our full carbon footprint with what science requires from the energy sector to limit global warming to 1.5°C. The Science Based Targets initiative (SBTi) has preliminarily concluded that our new targets align with what the 1.5°C pathway requires from energy companies. The SBTi will officially announce this target classification during 2020, once it has released the 1.5°C-reduction pathway for energy companies.

In the rest of this chapter, we elaborate on all the actions we take to meet our climate targets.

# Building more renewable energy capacity

Our build-out of green energy is a key driver in our decarbonisation journey, as it makes our energy generation less carbon-intensive.

We deploy green energy at scale. In 2019, our energy generation from renewable sources accounted for 86% of our total energy generation. Increasing our green energy share makes our energy generation less carbon-intensive as it reduces the carbon emissions per unit of energy produced.

By 2025, we target to have installed 20GW renewable capacity offshore and onshore, enough to power 35 million people. By 2030, we aim to reach more than 30GW of installed capacity across renewable technologies, enough to power more than 55 million people.

## Offshore wind

Ørsted is the global leader in offshore wind with a 30% market share. The investments we have made have been instrumental in making offshore wind a scalable technology that can compete on cost. This has meant that offshore wind has gone from a niche to a global and rapidly growing industry.

Today, we have an industry-leading portfolio and pipeline of offshore wind projects. By the end of 2019, we had installed 6.8GW of offshore wind and we have 3.0GW under construction. In addition, we have a further 5.0GW of awarded

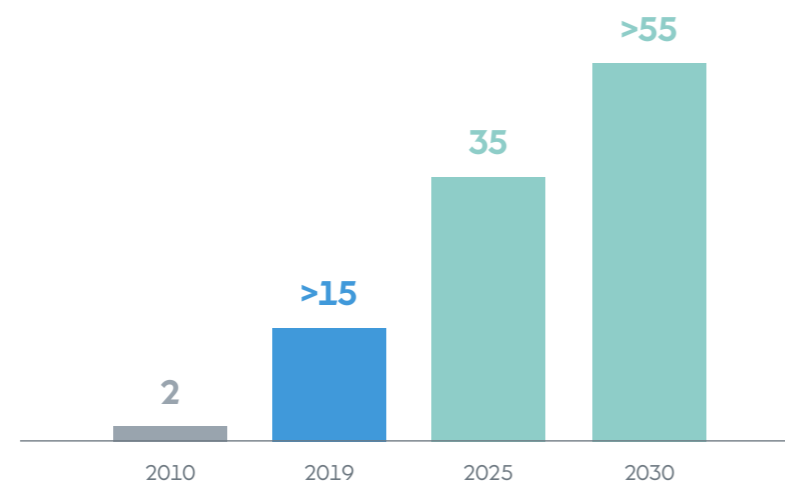


## US

In 2019, we won the rights to build two large-scale offshore wind projects on the US East Coast. Our US offshore wind portfolio now has a total capacity of 3.0GW.

We also decided to build a combined solar farm and storage facility, Permian Energy Center, in Texas. Once operational in 2021, the facility will be able to deliver power to 175,000 people with its generation capacity of 420MW and its 40MW storage facility.

## People powered by renewable energy capacity built by Ørsted (million)



# Bringing renewable energy to new markets

It is a key priority for us to continue the globalisation of Ørsted and for the offshore wind technology to meet the increasing demand for green energy across continents.



## Taiwan

In 2019, we began constructing our first large-scale Taiwanese offshore wind project, Changhua 1 & 2a. The wind farm will have a capacity of 900MW, enough to supply green power for around 600,000 Taiwanese households.



## European markets

We are the leading offshore wind provider across Europe. In 2019, we commissioned the world's largest offshore wind farm, Horns Rev 1, in the UK. We are also bringing green energy to new markets, including the Netherlands where we are constructing Borssele 1 & 2.

offshore capacity. Our target is 15GW capacity installed offshore by 2025, enough to power more than 30 million people.

## Onshore wind, solar PV, and storage

In our onshore business, we are building a growing regional US leadership position comprising onshore wind, solar PV, and storage. Our activities will soon span seven US states.

Our onshore business has a portfolio of 2.1GW in operation or under construction of which 1.7GW is onshore wind and 430MW solar PV. In addition to the generation capacity, we have 40MW storage capacity. We have a target of

5GW installed onshore capacity by 2025, enough to power more than three million people.

## A rapidly expanding global renewables market

We are bringing green energy to new countries and continents. By 2030, global installed renewable energy capacity is expected to be four times what it is today. Our strategic aspiration is to maintain our position as a global green energy company in the rapidly expanding international renewable energy market.

We will continue to invest all of our capital in green energy projects that allow

us to unite financial and environmental sustainability.

In the past decade, we have mainly invested in European projects. In 2019, we significantly increased our investments outside Europe, in our onshore and offshore projects in the US and Taiwan. Towards 2025, we expect to maintain our investment level in Europe, while significantly increasing our investments in renewable energy in North America and Asia Pacific.

# Phasing out fossil fuels in our energy generation

Our combined heat and power plants used to run on fossil fuels, primarily coal. Our decision to fully phase out coal in 2023 and convert to certified sustainable biomass has been instrumental in our green transformation.

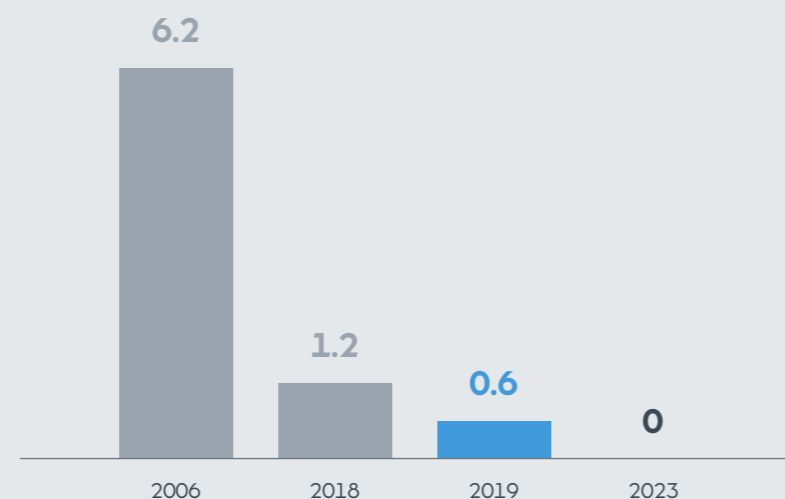
Over the years, we have taken steps to decarbonise our combined heat and power (CHP) plants. In 2009, we decided not to build new coal-fired power plants, and in 2017, we decided to fully phase out coal in 2023.

Our phase-out of coal has been fundamental to our green transformation. We have reduced our coal consumption by 91% in comparison with our basis year of 2006, and in 2019, coal only accounted for 9% of our energy generation. We have achieved 26% of the reduction by closing three of the coal-fired power plants we had in 2006. The rest has been achieved by converting our CHP plants to run on certified sustainable biomass, primarily wood chips and wood pellets. On pages 28-29, you can read more on how we ensure the sustainability of biomass through certification.

With the completion of the biomass conversion of the CHP plant at Asnæs in Denmark by the end of 2019, we had converted six CHP plants. We now only have one coal-fired power plant left which will be closed in 2023, enabling us to meet our zero-coal target.

We have rebuilt our CHP plants to sustainable biomass to phase out coal, and to help significantly reduce our carbon emissions over the past decade. It is not part of our strategy to build new biomass-fired CHP plants.

Our consumption of coal million tonnes



## Reducing emissions from natural gas and oil

In addition to coal, we still use natural gas and oil at our CHP plants. In 2019, natural gas and oil accounted for 25% of our emissions from energy generation. We are looking into green alternatives as, in 2023, when we have eliminated our use of coal, reducing the remaining use of fossil fuels at CHP plants will be the main lever to decarbonise our company emissions beyond 98%.

We have natural gas-fired boilers at six CHP plants. We use gas where it has not been possible to convert to sustainable biomass, and in some situations as a

back-up fuel when supply of sustainable biomass is limited or in situations of high energy demand. We are contractually required by our heat customers, the Danish municipalities, to maintain gas to ensure the stability of heat supply.

Oil is primarily needed for start-up of the CHP plants. It is technically possible to replace oil with a bio-alternative, but it is still difficult to find an alternative that is both cost-competitive and lives up to high sustainability requirements in relation to sourcing, processing, and alternative uses of the feedstock, such as crops for food production.

# Carbon neutral offshore logistics operations

Our vessels at sea run mainly on fossil fuels. To reach carbon neutrality by 2025, we decarbonise our offshore logistics operations.

To operate and maintain our energy assets, we need to access them on land and at sea. In 2019, emissions from operations and maintenance accounted for 44kt CO<sub>2</sub>e of our total carbon footprint. This share is set to increase as our installed renewable energy capacity grows.

The vessels that we use to operate and maintain our offshore wind farms, and which run on bunker fuel, are the main source of emissions.

We currently do not have all the solutions to make the operation of our offshore wind farms carbon neutral by 2025, but we will use it to guide the development of our offshore logistics towards 2025 and beyond. Our approach is to reduce emissions as far as possible and to decouple the growth in our offshore wind portfolio from the carbon emissions that result from vessel operations.

## Emission-reduction initiatives

In 2019, we launched a range of emission-reduction initiatives focused on offshore logistics in close cooperation with our suppliers and partners.

Firstly, we optimise the operations of our current vessels. We currently charter three service operation vessels and more than 30 crew transfer vessels. All vessels have an expected 20-25-year lifetime, so there are large cost and climate benefits from efficiency initiatives. Our new initiatives include improved planning and optimisation of sailing routes, transit speeds, and docking patterns. For instance, we

sail at reduced speed to save fuel when operationally possible and aim to fill up as many seats as possible on board. It is still too early to report on the effects of the initiatives, but we are implementing tools to track the progress day by day for all vessels.

Secondly, we investigate solutions to decarbonise our offshore logistics operations through research and development. Technological advances are necessary to decarbonise the shipping industry with breakthrough innovation needing to take place in the 2020s to meet the 1.5°C pathway. Technologies based on advanced biofuels and hydrogen-based fuels need maturation before they can replace today's fuels. We are testing batteries as

a supplement to diesel on our hybrid crew transport vessel at the offshore wind farm Borssele in the Netherlands. Also, we are exploring the potential of charging hybrid vessels directly at our offshore wind farms.

When we construct offshore wind farms, vessels are needed to install wind farm components offshore. These vessels are operated by our contractors. Here, we have set up a programme to work with construction suppliers to bring down emissions. Read more about our efforts on pages 20-21.



## Insights from Ørsted's Environmental Hero 2019

**Morten Perdomo Rostrom** is Lead Operations Specialist in our offshore wind business. In 2019, he ran an innovation game on how to decarbonise our logistics and received Ørsted's internal Environment Award for his personal contribution to making Ørsted an even greener business.

### What motivates you in your work at Ørsted?

Our company vision gives me a lot of energy. I believe that the world needs to listen to climate science and act accordingly. We need to protect planet Earth, because every day, we humans are causing irreversible damage. Personally, I feel obliged to do what I can to change things for the better, and my job allows me to do just that. So, I pedal hard to get to work every morning!

### What are the benefits of having a carbon neutral 2025 target?

Every step in a greener direction counts, and every gramme of CO<sub>2</sub> that we prevent from going to the atmosphere buys time to mature the innovation that will take us all the way to reaching carbon neutrality. The driver for us isn't just to reduce cost. It's to reduce our emissions.

### What is the main obstacle to reaching the target?

Money! Burning diesel is still much cheaper than using sustainable fuels. And we need to stay competitive as a company, so we're dependent on finding cost-competitive alternatives and rethink the way we manage our logistics in partnership with the shipping industry. We need to work hard to reach our target, but we're up for the challenge!

# The next frontier is our supply chain and energy trading

With our energy generation and operations on track to become carbon neutral by 2025, the next frontier is to reduce emissions from our supply chain and energy trading. We target a 50% reduction in 2032, and to reach net-zero by 2040. This will require collaboration with our suppliers and profound innovation across all levels of our supply chain.

For the world to reach global net-zero emissions by 2050 at the latest, businesses must collaborate across industries and supply chains and take responsibility for reducing emissions beyond their company operations. For most companies, emissions which are indirectly linked to their operations make up the majority of their carbon footprint. This is typically also the case for energy companies if they trade fossil-based energy or have a large portfolio of construction projects. Both are true for Ørsted.

By 2040, we want our total carbon footprint to be carbon neutral. With this target, we want to help foster innovation across the renewable energy supply chain and deliver the scalable carbon neutral solutions that are urgently needed.

Already in 2032, our target is to have reduced the indirect emissions from our supply chain and energy trading (scope 3) by 50% compared to 2018. In 2019, our indirect emissions totalled 34,604kt CO<sub>2</sub>e.

The majority of emissions comes from the production and end use of the natural gas traded in wholesale markets.

The second-largest source is our offshore wind supply chain. As we accelerate our global green energy build-out, all else being equal, we expect this footprint to increase. The third source is the supply chain for our combined heat and power plants. As we phase out coal, these emissions will significantly decrease.

## We reduce our trading of fossil-fuel based energy

Natural gas is a fossil fuel that should eventually be phased out of the energy system. However, during the transition period towards an entirely green energy system, natural gas helps ensure reliability of supply.

Ørsted is bound by several long-standing gas purchase agreements, some of which were signed in the 1980s with the Danish Underground Consortium (DUC). Under these agreements, we must buy the natural gas produced by DUC. We also have a long-term supply contract with the gas company Gazprom.

In 2019, we decided to gradually reduce our gas trading towards 2032. As a consequence, we will not renew or enter into new long-term gas purchase agreements.

Also, in late 2019, we entered into an agreement to divest our liquefied natural gas (LNG) business. As this is a divestment that accounts for more than 10% of our 2018 target baseline, we will not count it as an emission reduction, but will adjust our baseline accordingly.

Finally, we increase the green share of the power we sell to our customers. In 2019, this increased to 68% from 64% in 2018, mainly due to higher green power sales in the UK. As we have signed an agreement to divest our private customer business, we focus on supporting our corporate customers in using more certified green power and reduce their carbon footprint.

## We focus on the offshore wind supply chain

To start reducing emissions in the supply chain, we have identified the most carbon-intensive activities, which are the manufacture of wind turbines, foundations, substations, cables, and components. These are produced using steel, aluminium and copper, among other materials, which are energy intensive to extract and manufacture.

The second-largest source of emissions in our offshore wind supply chain is the fuels burned by the construction vessels that transport and install these components offshore.

Reducing emissions in our offshore wind supply chain is therefore linked to the decarbonisation of heavy industry and shipping sectors. Global emissions from these sectors have grown continuously over many decades, as innovation in low-carbon technologies has been slow compared to the energy sector.

## Our new supply chain decarbonisation programme

In 2020, we are launching a programme to engage with our top strategic suppliers involved in the manufacturing and installation of offshore wind farm components. We have more than 22,000 suppliers in total, but the strategic offshore wind suppliers account for approx 50% of our total procurement spend and are best placed to help reduce supply chain emissions.

The initial engagement will focus on three levers key to decarbonise our offshore wind supply chain.

## Levers to decarbonise Ørsted's offshore wind supply chain

We will encourage top strategic suppliers to:

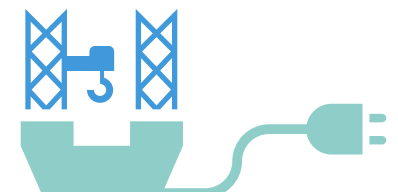
- 1 Disclose their own emissions and set science-based carbon-reduction targets

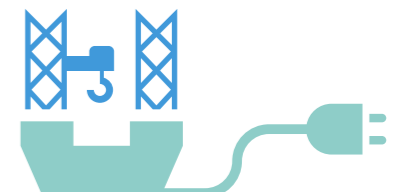
1.5°C



- 2 

Use 100% renewable electricity in the manufacturing of wind turbines, foundations, cables, substations, and components

- 3 



## Insights from our Chief Procurement Specialist



**Ninna Ipsen** is responsible for strategic procurement projects, including engagement with suppliers on decarbonisation.

### How will Ørsted work with suppliers?

We'll engage in dialogue with our top strategic suppliers to understand the maturity of the technologies needed and, based on our combined knowledge, develop a roadmap that, over time, can deliver the carbon reductions needed. While some suppliers are

very mature in their decarbonisation journey, others are only starting out, and we'll design our engagement to be supplier-specific.

### What are the main challenges?

Many of the low-carbon technologies needed to decarbonise our supply chain are not yet cost-efficient or available at scale. We want to generate the demand for low-carbon solutions and work with our suppliers to drive scale and cost reduction in a way that delivers the right decarbonisation

solutions fast and in a cost-effective way. As we depend on the market to meet our objectives, collaboration will be key to succeed.

### What's in it for our suppliers?

We have highly capable suppliers in our industry. Many of them are very familiar with the innovation journey required, and they know that innovation towards still more sustainable solutions will enable them to stay relevant and competitive in the future.

# Reducing emissions from our administration

Our daily business operations cause a very small share of our total carbon emissions. Still, we have implemented a broad range of initiatives to reduce these emissions as part of our efforts to drive out emissions in all corners of our business.

At Ørsted, we have 6,500 employees at 68 locations around the world. They commute to and from work each day. For them to perform their daily tasks, our buildings need power, heating, and cooling. We also provide them with the right work equipment. For many of our employees, this includes electronic devices such as a computer and a phone, and furniture such as a chair and a desk. For others, it includes workwear and safety equipment.

Sometimes, our employees need to travel for work purposes. And every day, we provide healthy food and drink in our canteens.

To reduce emissions from our daily operations, we buy greener products and provide more sustainable choices to our employees.

## Road transport

In 2019, we set a target to electrify 100% of our vehicles by 2025, including company cars and service vehicles. To support the transition, we will no longer buy or lease new fossil-fuelled cars from 2021, we will add more electric chargers at our parking facilities around the world, and electric car sharing and rentals are now more easily accessible to employees. We were the first Danish company to join The Climate Group's EV100, a global initiative dedicated to accelerating the transition to electric vehicles.

Ørsted

## Work equipment

We incorporate sustainability criteria in our procurement tenders. In 2019, we renewed our contracts for furniture and PCs. All new furniture will have FSC®-certified wood, and we require our suppliers to take back outdated furniture for donation or recycling. All new PCs have the energy-efficiency rating Energy Star 6.1, and will be delivered in 100% recycled packaging. We have not seen any additional costs in relation to making strict sustainability criteria a competition parameter in tenders.

## Buildings

All the power we purchase and use globally in our office buildings, facilities, and for operations is covered by green certificates, mainly from our own offshore wind farms. We continuously reduce heat and power consumption through our energy-efficiency initiatives, with the switch to LED lights currently contributing the most energy savings in office buildings.

## Food and drinks

We are reducing carbon-intensive foods, such as meat and dairy in our canteens. Vegetarian and vegan alternatives are available, resulting in a reduction in meat consumption at our main office locations in Denmark and London.

## Waste

In all office areas and canteens, waste sorting is common practice, food waste is converted into biogas, and we have banned single-use plastic bottles. On our service operation vessel Wind of Change, we have fitted a custom-built onboard system for desalinating and filtering seawater to produce drinking water from North Sea water. This saves up to 8,000 plastic bottles per four-week trip.

## Air travel

From 2019 onwards, we offset all emissions related to our air travel. We purchase carbon credits verified according to international standards for carbon offsetting and plant mangrove trees. Over their lifetime, the trees grow and sequester emissions equivalent to our annual air travel emissions. We have launched a tool for our employees so they can also offset their private carbon emissions through the same offsetting project.

# Striking the balances of the green transformation

The green transformation will fundamentally change how we generate energy to power our lives. Building the green energy systems we need will require balancing different and sometimes contradictory needs.

The world's long reliance on fossil fuels to power modern life is interfering with our planet's natural ecosystem and its ability to sustain life and provide a good home for millions of species – including our own.

We need to transform the world's energy supply from fossil fuels extracted below the surface of the Earth to harvesting our energy from the natural forces of the wind and the sun. It is a fundamental change to how we generate energy, and it will require balancing different and sometimes contradictory needs.

Firstly, renewable energy requires space at land and at sea. Finding the space for renewable energy must be balanced with the interests of protecting nature and the interests of other industries. It will require trade-offs and new ways of allocating space.

Secondly, instead of digging out and burning coal, oil and gas, which store carbon underground, we need to harvest

resources above ground such as wind, sun, and biomass. To maximise the positive climate benefits of the transition, we need to ensure that our use of renewables is sustainable. This is especially important for the use of wooden biomass for energy generation as not all biomass is sustainable. It depends on the type of biomass and how it is produced. Strict requirements must be met to ensure biomass delivers significant carbon savings.

Thirdly, the shift towards a net-zero emissions world is a tremendous growth opportunity with net benefits for employment and the economy. While jobs will inevitably be lost in some sectors, more jobs will be created in other sectors through the innovation and massive investments driving the green transformation. For companies whose business models are deeply embedded in fossil fuels, there is no doubt that the shift will be challenging. As a society, we must support those whose jobs are at risk and ensure a just transition. This will also minimise the risk that the green transformation is slowed down due to public resistance.

**“There is a cost to everything. But the biggest cost is doing nothing.”**

**António Guterres**  
Secretary-General of the UN  
Excerpt from his remarks at the  
2019 Climate Action Summit

Offshore wind turbine foundations and underwater structures provide a home for many creatures and plants under water.



# Finding the space for green energy at scale

Building renewable energy technologies at scale will help protect natural ecosystems from the consequences of climate change and benefit local economies that invest in renewable energy. To succeed, the build-out of renewable energy must be balanced with the interests of other industries and the need to protect the natural environment.

Fossil fuel-based power generation requires relatively little surface area. The fuels are extracted from under the ground, transported to power plants, and incinerated. With renewable energy, it is different. It is a resource which is harvested in nature, and this requires more space.

This is also true for offshore wind, although offshore wind farms do not necessarily exclude other use of ocean space. Wind turbines, cables, and other installations only cover a small proportion of the total wind farm area. When activities can co-locate safely, this leaves plenty of room for other purposes, whether it is ensuring that ecosystems and biodiversity thrive or supporting use by other marine industries. As wind turbines are getting larger and spaced further apart, co-use may even become increasingly possible.

## Sustainable use of the oceans for renewable energy

Finding the space for renewable energy is vital to the future health of our planet. To succeed, the space needed for offshore wind needs to be carefully considered and balanced with other uses of the ocean to ensure a sustainable build-out.

In 2019, the High-Level Panel for a Sustainable Ocean Economy, a group of government leaders representing 30% of the world's national ocean space, launched a call to action to accelerate ocean-based solutions that support the Paris

Agreement. Ørsted and Equinor responded positively and created a new industry-led coalition to scale up ocean-based renewable energy. We also contributed to establishing the UN Global Compact principles for sustainable oceans and joined the UN Global Compact Action Platform for Sustainable Ocean Business. The three initiatives support each other, as an accelerated implementation of ocean-based solutions and co-use of ocean space must take place in a sustainable way.

## Aligning co-use with local interests

When a marine space is allocated for developing an offshore wind farm, it is important for all stakeholders to strike the right balance on how to use the maritime space most effectively. At Ørsted, we collaborate with authorities, ocean industry peers, local communities, and environmental NGOs to ensure we have the best available knowledge and to address local needs and expectations.

As an example, we have established an ongoing cooperation with the local fishing industry around our UK offshore wind farm Westernmost Rough, which was inaugurated in 2015. It is sited in highly productive fishing grounds for lobster and crab. Our environmental impact assessment prior to the construction of the wind farm predicted some impacts on lobster and crab populations from the construction. Nevertheless, to understand these impacts better and safeguard the

local fishing industry, we have carried out a long-term scientific study to examine the impact on these shellfish stocks. This was the first full-scale study of its kind worldwide, and the results to date confirm that shellfish populations were not negatively affected by construction and illustrate that offshore wind and fisheries can co-exist in the UK North Sea.

**Offshore wind requires space**  
With less than 1km<sup>2</sup> of land, Ørsted's Avedøre Power Station has nearly the same power generation capacity as our offshore wind farm Borssele 1 & 2 will have when completed in 2020. The wind farm will be able to power 2.4 million people from 94 wind turbines across more than 100km<sup>2</sup>.



# Co-existence with nature is a must

Phasing out fossil fuels and building enough green energy are two of the most important actions to halt climate change and thereby limit biodiversity loss. The biodiversity benefits and impacts of building and operating offshore wind are well-known, but there is a need for improved scientific understanding to ensure that the build-out supports biodiversity protection and restoration.

Constructing and operating new technology in nature come with environmental concerns. For offshore wind farms, there are typically both positive and negative effects on the local environment. When installed, the underwater foundations and scour-protection material can function as home for certain marine species such as algae and mussels, which can grow on the structures and attract crabs and fish that are prey for marine mammals such as dolphins and seals. In this way, offshore wind can provide local increases in marine biodiversity that can positively affect some environments.

At the same time, there are temporary environmental impacts during construction. Among these, we count the noise impact on sensitive species such as marine mammals when installing foundations and impacts on coastal habitats when installing the transmission cables. When in operation, offshore wind farms can affect certain bird species that migrate or feed in or near the area.

## How we manage impacts on the natural environment

Over the past more than 25 years, we have developed our expertise in constructing and operating offshore wind farms while respecting important local environmental and social interests. Today, our global teams of more than 50 environmental experts make up the largest in-house capacity in the offshore wind industry. This expertise guides our work to understand impacts at each of our offshore wind farms and helps us identify the best ways to protect the natural environment.

Protecting biodiversity is an integral part of the way we work, and we apply precautionary measures and take the unique environment of each of our sites into account. Our offshore wind policy for biodiversity protection lays out our principles for how we do this.

## Large-scale build-out of offshore wind and protection of nature

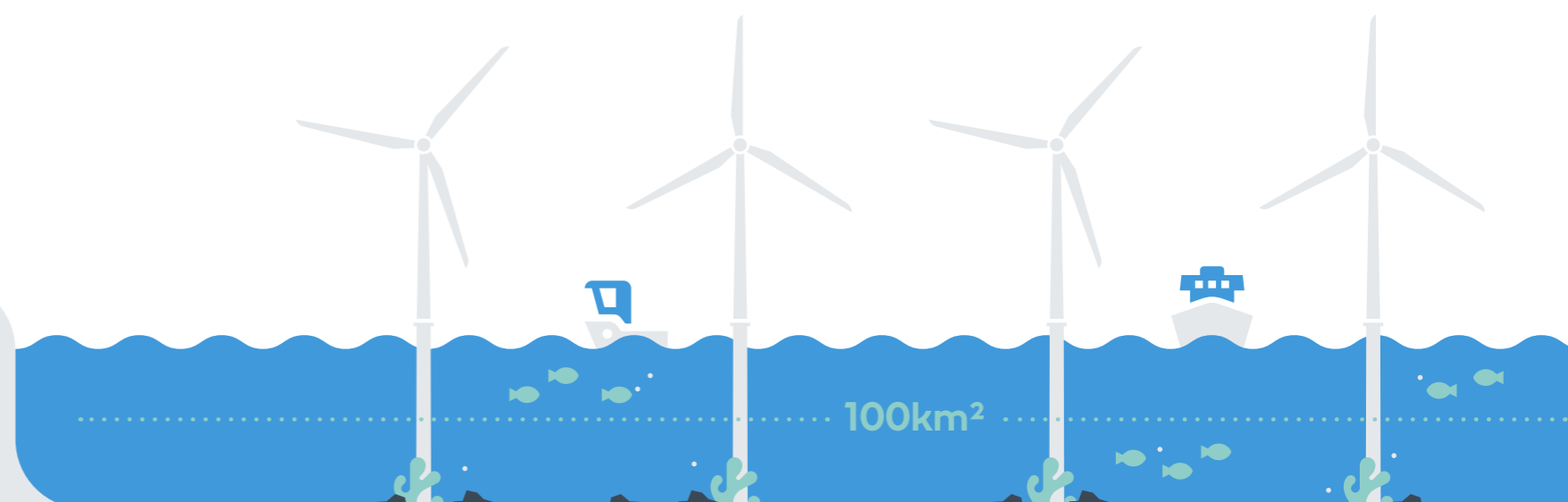
The impacts of offshore wind farms on the natural environment are complex fields in marine science with limited long-term scientific data available on an international level. To enable an accelerated build-out of offshore wind and ensure nature protection, there is a need for improved use of relevant scientific data on biodiversity benefits and impacts. Improved accumulated knowledge can inform the design of wind farms to ensure that the build-out

of offshore wind supports biodiversity protection and restoration.

**A global build-out of offshore wind can help halt climate change. Today, it's not wind energy that puts marine biodiversity under pressure. If the oceans are healthy and biodiversity is protected when the wind turbines are installed, there are no obstacles to building much more offshore wind.**

Jan Vande Putte  
Energy & Nuclear Campaigner  
Greenpeace

In addition, environmental NGOs, marine industries, and authorities need to cooperate on how to best ensure that local nature protection strategies and global climate goals work together towards ensuring a habitable planet for all species. As a step towards this, Ørsted is taking a major part in the development of regional multi-stakeholder groups in Europe. Through these, we will collaborate with stakeholders to enable the further co-existence of offshore wind with marine industries and nature in Europe.



# How we maximise the climate benefits of biomass

Using wooden biomass for energy generation has allowed us to almost fully retire coal. To ensure significant carbon savings, the biomass must meet strict sustainability criteria. If not, it should not be used in energy generation. Over time, electrified alternatives can replace and supplement sustainable biomass.

In the late 1970s, the combined heat and power (CHP) plants in Denmark were converted from oil to coal to reduce oil import dependency. However, as the awareness of climate change and the demand for carbon reductions increased, politicians and energy companies began to explore greener alternatives to coal.

The same was true for Ørsted. Only a decade ago, our coal-fired power plants were still a significant part of Danish carbon emissions. At the same time, we had just launched our first strategy to transform our business from fossil fuels to green energy, because we strongly believed the future of energy was green.

How could we decarbonise our heavy fleet of CHP plants while at the same

time continue to provide flexible heat and power at a competitive price?

## Biomass has allowed us to retire coal

Among politicians and our municipal district heating customers, there was widespread support for wooden biomass as the most climate-friendly alternative to coal, whereas converting to gas would make Denmark dependent on another fossil fuel-based solution for decades. On this basis, we decided to convert all our CHP plants to use wooden biomass.

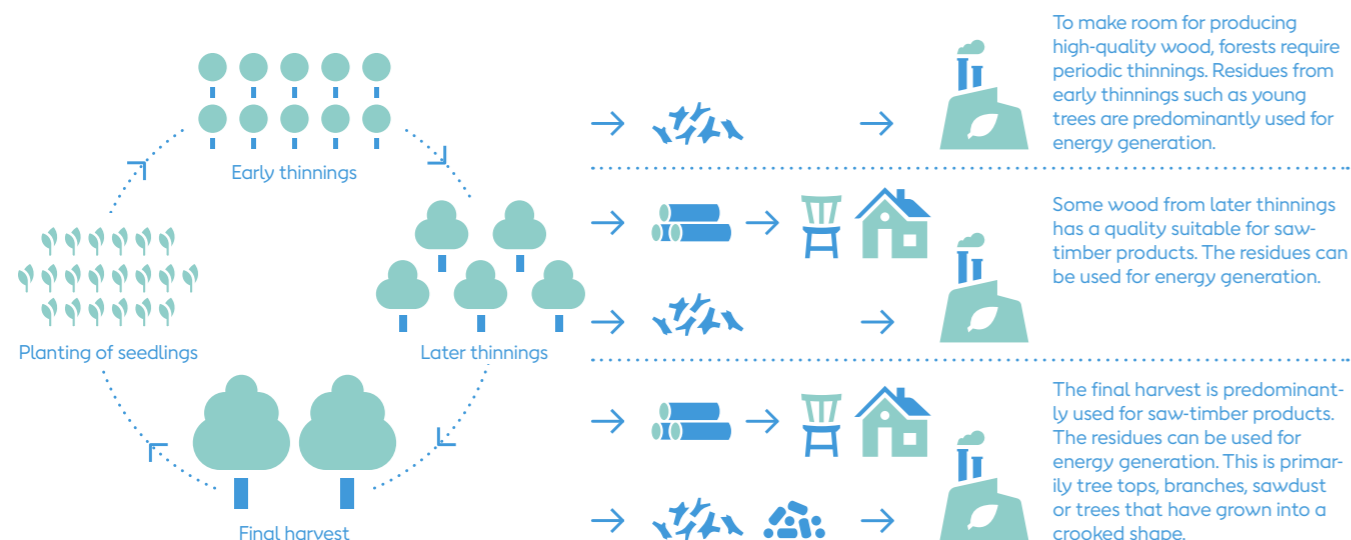
Sustainable biomass has allowed us to almost fully retire coal over the past decade, and it has turned out to be one of the largest contributors to Denmark's total carbon-emission reductions since 2006. Had we continued coal-firing at

2009 levels towards 2030, we would have emitted an additional 90 million tonnes of carbon in the coming decade, the same as the annual emissions from 45 million cars. In 2019, using biomass for our energy generation helped us avoid the emission of 1.4 million tonnes of carbon.

## Not all biomass is sustainable

To make biomass a sustainable alternative to coal and gas, we have needed to ensure that our biomass contributes to significant carbon reductions. This is not the case for all use of biomass for energy generation as not all biomass is sustainable – it depends on the type of wood and how it is produced. At Ørsted, we only want to use biomass that is sustainable. So, how do we ensure this?

## Wood residues from forestry and industries can be used for energy generation



It is not a simple task to determine the sustainability of biomass, but it is possible. Today, our biomass is certified and meets the requirements of the Danish industry agreement on sustainable wooden biomass. It defines the difference between sustainable biomass and non-sustainable biomass.

## Two crucial requirements

When biomass is burned, it emits the same or slightly more carbon than coal per unit of energy produced. The important difference is that the carbon from biomass is already a part of the planet's carbon balance, whereas carbon from coal and other fossil fuels adds new carbon to the atmosphere. Our biomass must meet two crucial requirements to maximise the climate benefit of using wooden biomass and deliver significant carbon savings compared to fossil fuels.

Firstly, we only source wood chips and pellets produced from forestry and industry residues, which are not merchantable for use as saw-timber products. Tree trunks that can be sold to sawmills and used for e.g. buildings or furniture should not be used in energy generation. Such high-quality purposes are the best use of wood from a climate perspective, because it contributes to storing carbon more long term, and because it substitutes more carbon-intensive materials such as steel, plastic, and cement.

Secondly, we only source biomass from already established sustainably managed production forests with an ongoing reforestation. This is to ensure that our sourcing has no negative effects on the number of trees, the size of the forest or its health. If the forest maintains its size or grows, it keeps its carbon stock and its ability to contribute to the global carbon cycle.

## Residues give a short carbon-payback time

Because burning biomass emits carbon, we sometimes meet the concern that using biomass for energy generation is incompatible with scientific demands for reducing emissions quickly. This is a valid concern. Burning biomass creates a 'carbon debt' as the carbon is released sooner than the alternative of leaving it



## Insights from our sustainable biomass experts



**Peter Kofod Kristensen**, Senior Lead Sustainability Advisor, and **Lisbeth Lyck Sevel**, Senior Sustainability Advisor, work in our Bioenergy business and are educated and trained forestry experts. Peter and Lisbeth help ensure that all the biomass used is sustainable and delivers significant carbon savings.

## Why do you conduct site visits at our suppliers?

Peter: We conduct site visits because it's key for us to know who we're dealing with. We use the forest certification schemes like FSC® and SPB as the backbone of our sustainability assurance, our visits are focused on motivating and guiding our suppliers to meet our requirements.

## What are you looking for?

Lisbeth: Each forest is unique, so we need to get on the ground to understand it. We need to understand our suppliers, how the forests are managed and the products produced. Our aim is to understand the local context and any risks each supplier is working under. This helps us to develop our cooperation with our suppliers.

## Why do we need this documentation?

Lisbeth: To be trustworthy! We need the numbers and pictures to document that the biomass we source is sustainable and that we reach the carbon-reduction targets we have set and report on every year.

to rot on the forest floor. The carbon debt is paid back through the emissions avoided from burning coal as well as when the carbon is absorbed again by trees. With the need to reduce emissions quickly, we do not have time for a long payback time on the carbon debt.

That is why it is so important that we only use biomass residues with a relatively short carbon-debt payback time. We therefore welcome an upcoming study by the University of Copenhagen, which will develop solid data on payback times for biomass used in Denmark's energy generation. This can improve our tools to ensure that we only source the right kind of biomass.

## The value of a certification system

To ensure that our suppliers comply with our sustainability requirements, we have implemented the Sustainable Biomass Program (SBP) certification system. Under this system, independent third-party auditors monitor and certify that the suppliers meet our sustainability requirements. In 2019, 96% of our sourced

wooden biomass was certified. From 2020, it will be 100%.

We believe it should be required by law that all biomass used for energy generation should be certified sustainable in line with the principles outlined in SBP, FSC®, and PEFC. Certification schemes are not an iron-clad guarantee that the system is perfect. At present it is, however, the most forceful way for the energy industry to ensure that the biomass is sustainable and contributes positively to speed up the green transformation and to retire fossil fuels.

## The future of biomass

With the increasing green electrification of Denmark's energy system, the role of our central heat and power plants is primarily to produce heating for the Danish district heating system. Going forward, technologies like large-scale heating pumps and geothermal energy are increasingly expected to become cost-competitive alternatives to sustainable biomass. It means that over time, they can replace and supplement sustainable biomass in Danish district heating as existing capacity needs renewal.

# Socio-economic impacts of the green transformation

The transition from fossil fuels to renewables entails tremendous economic opportunities for growth and job creation. While jobs inevitably will be lost in some sectors, more jobs will be created in other sectors. Ørsted's green investments contribute to creating green jobs, and we work to maximise the local positive impacts of our green development projects.

The shift from a fossil fuel-based economy to a net-zero emissions world is a tremendous growth opportunity with net benefits for employment and the economy. Accelerated climate action could lead to a net employment gain of up to 37 million jobs in 2030, according to New Climate Economy. This is more than the entire labour force of the United Kingdom. According to IRENA, transforming the energy system could boost global GDP by as much as 2.5% by 2050.

This provides tremendous opportunities for companies that are able to transform themselves to serve the rapidly growing global market for sustainable solutions. At the same time, there is no doubt that the industrial shift from fossil fuels to renewables will be challenging for companies whose business models are reliant on fossil fuels. Jobs will inevitably be lost in some sectors and not everyone will be able to find a new job easily. This can have severe consequences for local communities and the individuals affected. As a society, we have a responsibility to ensure a just transition and to make sure that no one is left behind as we shift from fossil fuels to green and sustainable technologies. It is a joint responsibility for policymakers, industry, workers, and communities.

**Green investments create jobs**  
Many of the job losses will be offset by good jobs in the renewable energy industry. As countries deploy green energy, it will create a local demand for green jobs

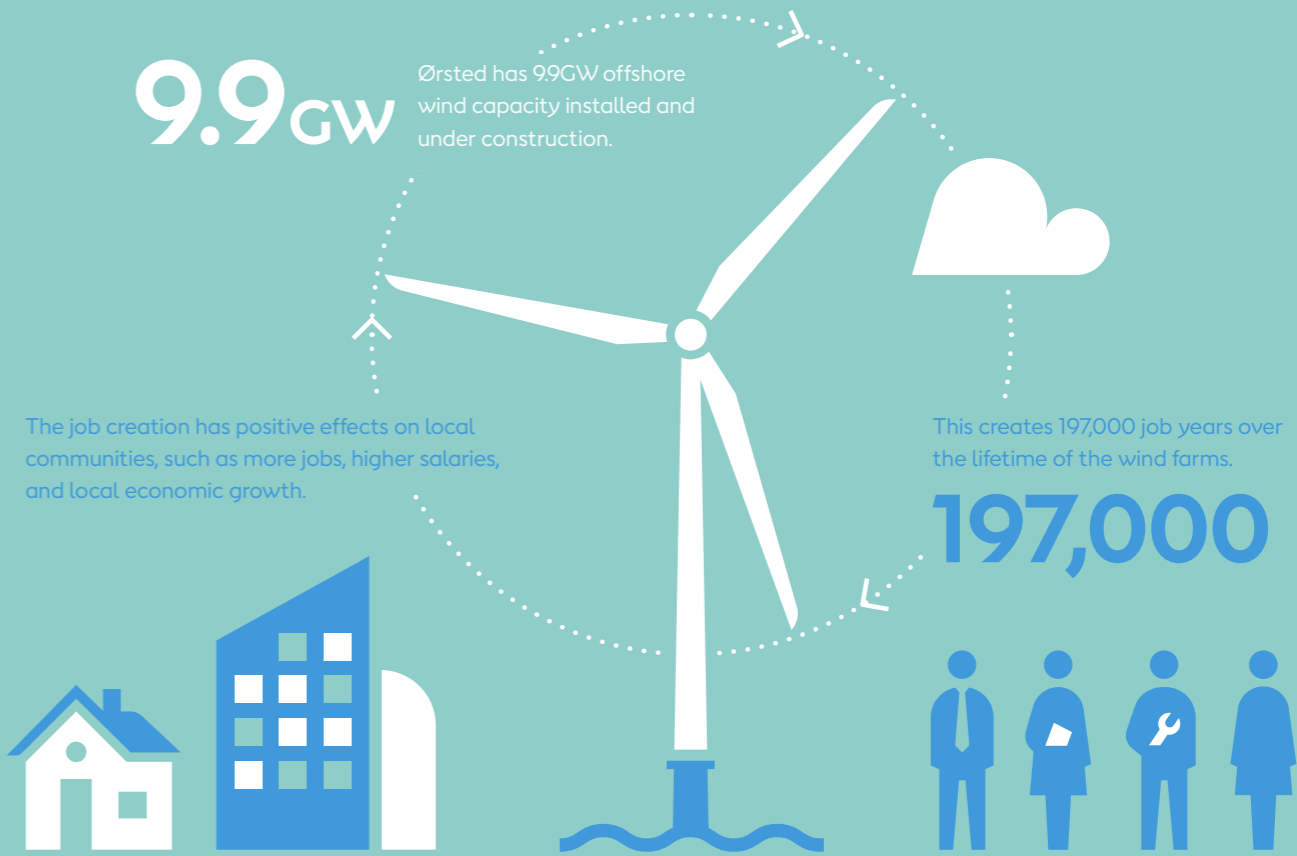
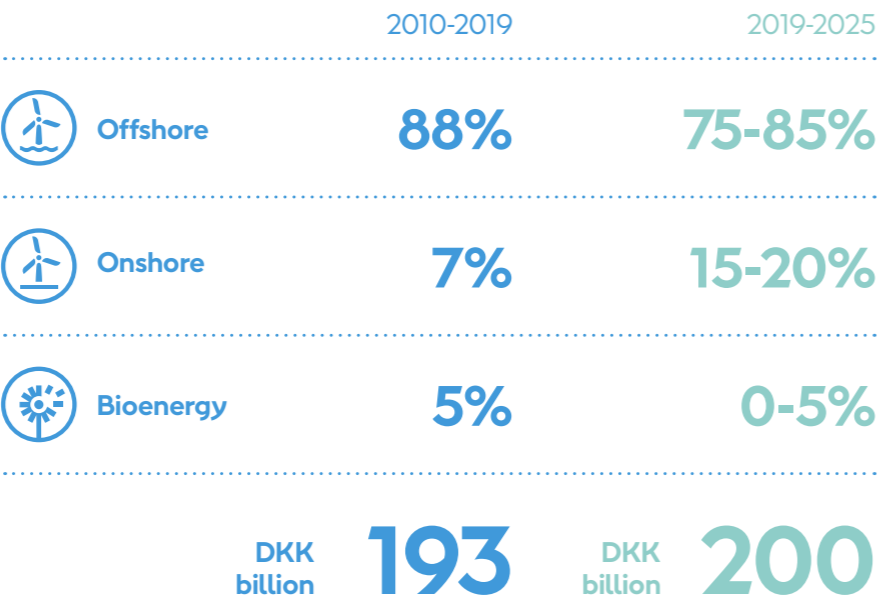
and expertise and require local supply chains to support the transition.

At Ørsted, we have estimated the job creation from our own and joint venture partner investments in offshore wind, based on IRENA's method. With our partners, we invested approx DKK 193 billion in green energy between 2010-2019 and almost 90% were in offshore wind. From 2019 to 2025, we expect to invest DKK 200 billion in green energy.

Our estimate shows that the offshore wind farms we have installed and have under construction create 197,000 job years during their lifetime. This corresponds to ensuring more than 5,400 average citizens life-long employment.

The job effect of building green energy capacity depends on local market conditions. Offshore wind is a well-established industry in North-western Europe. As the technology spreads to new regions,

## Accelerating our investments in green energy



such as North America and Asia Pacific, it will likely have local job effects similar to what has happened in regions like the Humber region in the UK, Norddeich in Germany, and Esbjerg in Denmark. All three have experienced a revitalisation due to offshore wind projects with positive economic impacts in the form of more jobs, higher salaries, and local economic growth.

**Local supply chains and skills development**  
Our estimate of job creation only covers jobs directly associated with construction, operations and maintenance, and decommissioning of our offshore wind farms. The job-generating benefits from our wind farms go beyond creating jobs in the wind industry. Every wind farm we build supports several thousands of jobs in local communities. The jobs are typically in hotels, restaurants, and other services.

When we develop a new energy infrastructure project, we engage in an early dialogue and cooperation with the local government, workers, and communities to understand their perspectives on the project and its local impact. Based on this,

we determine which initiatives are needed to ensure that local communities benefit from the project development. Our preference is always to engage in initiatives that create opportunities for long-term economic benefits such as supporting local supply chains and developing local skills, but we acknowledge that each project and community needs to tailor efforts to their unique circumstances.

To support the development of local supply chains, we ensure that local suppliers are aware of and have access to tenders for the offshore wind project. In Taiwan, we supported the establishment of a local sub-supplier network with the county government. It hosts workshops and events and is operated by the county government for the benefit of all offshore wind projects. This is a model we first developed and used with success when we constructed the Danish offshore wind farm Anholt in 2012-2013, and which we have used since in our offshore wind projects.

To support the development of the skills needed to build a local offshore wind industry, we engage in building local

expertise and training of local workers. For instance, in relation to our Ocean Wind project in New Jersey, we have signed memoranda of agreements with Rutgers, Stockton, and Rowan universities in New Jersey to support academic research, engineering programmes, and initiatives to further advance undergraduate and graduate students' knowledge of the offshore wind industry. In addition, we have joined forces with the New Jersey construction experts in JINGOLI to identify and train Atlantic City residents and students who are interested in working in offshore wind farm construction or in one of the permanent positions that will become available when the project is completed.

We have also set up an apprenticeship programme with DaYeh University in Taiwan to cultivate future offshore wind operations and maintenance technicians. As a part of this, we provide the latest industry experience to students through guest lecturers and practical internships. Furthermore, we provide students the opportunities to take part in the operation and maintenance of wind turbines, as well as with drones and unmanned underwater vehicles on vessels.

# Green energy in a sustainable way

The pursuit of our vision to create a world that runs entirely on green energy must take place sustainably. We work systematically to advance our positive contributions and minimise potential adverse impacts through our sustainability strategy.

## Ørsted and the UN Sustainable Development Goals

At Ørsted, our entire business is focused on addressing the most pressing societal challenge of our time, the climate emergency. Addressing this is one of the central themes to the UN Sustainable Development Goals (SDGs) which define the greatest social, environmental and economic challenges currently facing the world.

Our transformation from fossil fuels to renewables has aligned our core business contribution with society's most pressing need. Our commitment to help create a world that runs entirely on green energy is our commitment to help limit climate change. The global green energy transition brings significant benefits to the climate, the environment, and societies. But while doing so, we must also limit the

potential adverse impacts that building and operating green energy infrastructure may have on nature and people.

We are a participant in the UN Global Compact and continuously implement the ten principles for good business conduct in our activities.

## 20 programmes to drive sustainability

Our sustainability strategy addresses societal challenges relevant to our business strategy. We conduct an annual assessment to determine the most material societal challenges, including new or emerging ones, and take action to address the most relevant challenges our sustainability programmes. Through this process, our sustainability strategy helps our business stay relevant, competitive, and fit for the future.

This year, we have grouped our 20 sustainability programmes into three categories. The first category aligns our business with climate science, the second one helps us address the potential impacts of the green energy transition, while the third ensures we remain an accountable and responsible business.

## Reporting and governance

On pages 34-35, we present our annual assessment of material societal challenges, including the steps taken, the results in 2019, and how this process leads to our 20 sustainability programmes. We further

describe how our programmes help us contribute positively to the SDGs and minimise any potential adverse impacts we may have.

On pages 36-47, we provide a full overview of our 20 sustainability programmes, including progress made this year. Four themes are described in more detail, showing how our business adapts to changing challenges. Finally, on page 48, we show how sustainability is governed in our organisation.

## Third-party assurance of data

The programme indicators and targets shown in the bottom row on pages 36-47 in this report are part of our ESG performance report 2019 and have been subject to third-party assurance by PwC.

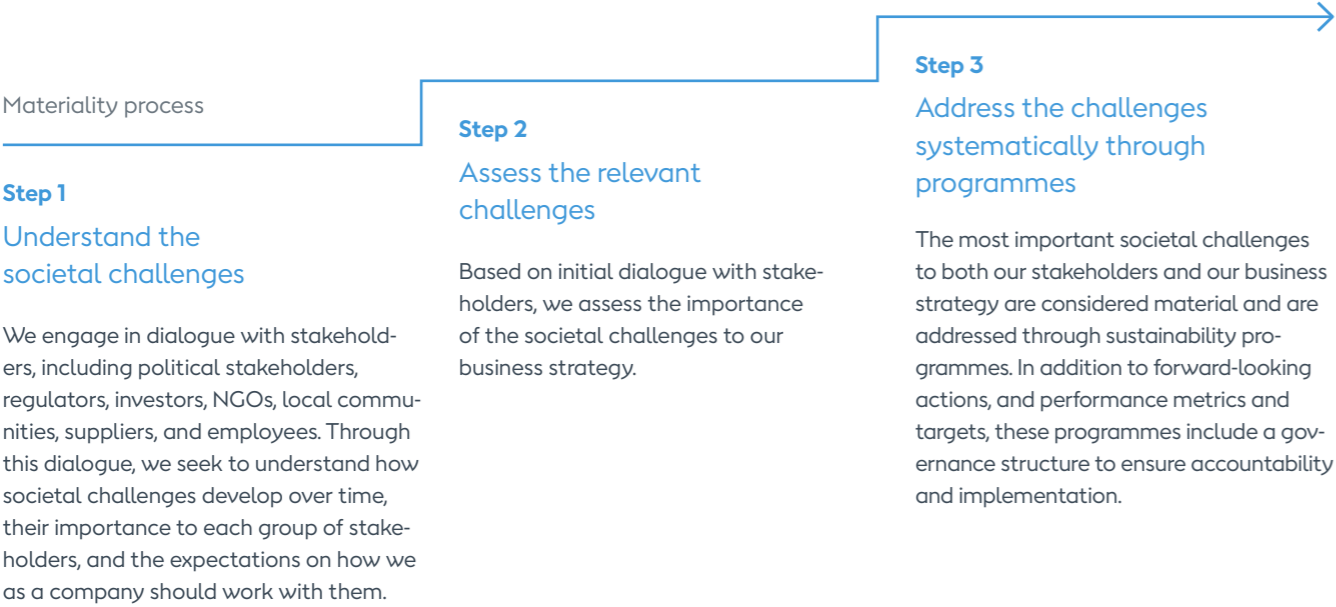
Read about the scope of the assurance in our ESG performance report, page 40.

On land and at sea, our employees are dedicated to help the world take the necessary steps in the transition to a sustainable future. Ensuring that they are safe and thrive at work is a key priority for us.

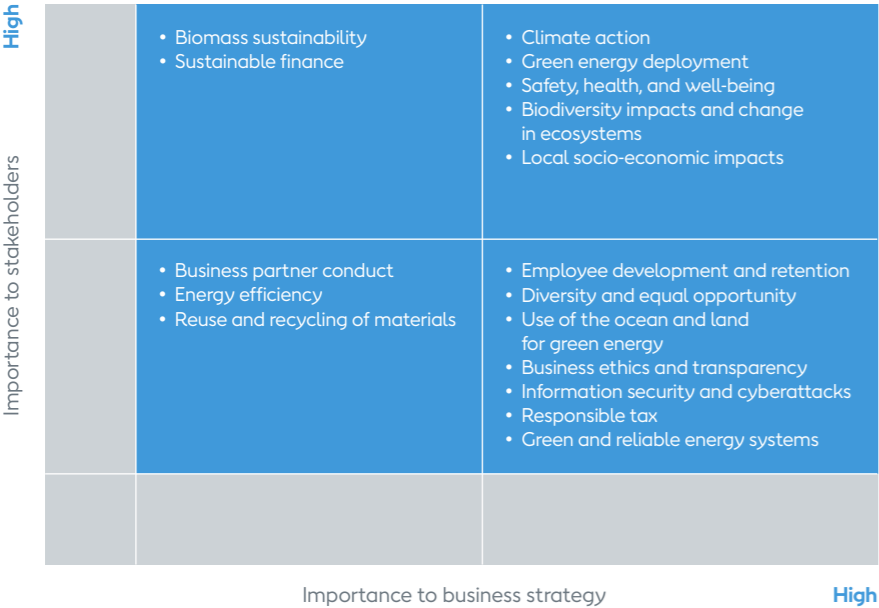


# Working systematically with sustainability and the SDGs

Through our annual materiality assessment, we seek to understand the challenges that currently face society and our business. We address the most material challenges through our sustainability programmes.



## Societal challenges with importance to our stakeholders and business



Programme overview	1 Decarbonisation of energy generation and operations	2 Decarbonisation of supply chain and energy trading	Programme overview	3 Deployment of offshore wind	4 Deployment of onshore renewable energy																																								
Societal challenge	<b>Climate action; energy efficiency</b>  As 73% of global carbon emissions come from the use of fossil fuel-based energy, decarbonising energy generation and improving energy efficiency are the most significant actions to limit climate change.	<b>Climate action</b>  Collaboration and innovation across industries and supply chains are needed to speed up decarbonisation.	Societal challenge	<b>Green energy deployment</b>  The deployment of renewable energy technologies must be accelerated to help phase out coal and other fossil fuels from energy systems at the pace and scale required by climate science.																																									
Our approach	We increase our total share of green energy and work to achieve carbon neutrality in our energy generation and operations. This covers the carbon emissions from the generation of heat and power, and our operations and maintenance activities, including the vessels servicing our wind farms, the vehicles we drive, and our sites (scope 1-2).	We reduce emissions from our supply chain, and from natural gas and fossil fuel-based power trading (scope 3) in line with scientific requirements and work to achieve carbon neutrality by 2040 (scope 1-3). We work with our suppliers to reduce emissions from the wind farm components and the services we purchase.	Our approach	We deploy offshore wind farms globally. We want to increase the deployment of offshore wind across our regions - the UK, Continental Europe, North America, and Asia Pacific. Through scale and technological development, we drive down the costs of green electricity in the markets where we operate.	We deploy onshore renewable energy technologies, including onshore wind and solar PV. Our focus is on building a regional leadership position in the US.																																								
Our progress	<ul style="list-style-type: none"><li>• We set a target to become carbon neutral in our energy generation and operations by 2025. This target covers all scope 1 and 2 emissions, as defined by the GHG Protocol.</li><li>• We increased the green share of energy generation to 86%, primarily due to higher generation from wind farms, increased thermal generation on biomass and lower heat and power generation based on coal and gas.</li><li>• We have decreased the carbon intensity of our energy generation by 86% since 2006 to 65g CO<sub>2</sub>e/kWh. We are on track to reach our target of 98% reduction by 2025.</li><li>• We are investigating ways to reduce emissions from our operations and maintenance (O&amp;M) vessels, including by testing batteries as a supplement to diesel bunker fuel.</li><li>• We will no longer lease new fossil-fuelled cars as of 2021 and we aim to reach 100% electric vehicles by 2025. As we have signed an agreement to divest our businesses Radius, B2C, and City Light, this target does not apply to them.</li><li>• We cover 100% of our own power consumption with green certificates, mainly from our offshore wind farms. In 2019, we also included power sourced for electric boilers.</li><li>• We have saved 8.8GWh through energy-efficiency initiatives and aim for 15GWh by 2022 (baseline year of 2017). Savings come from the installation of heating and cooling pumps, and optimisation of surplus heat and ventilation in our power plants and transformer stations.</li></ul>	<ul style="list-style-type: none"><li>• We set a new target to reduce emissions from our supply chain and energy trading. We will reduce emissions by 50% by 2032. This target covers all scope 3 emissions, as defined by the GHG Protocol.</li><li>• We will become fully carbon neutral across our entire footprint by 2040, covering all scope 1-3 emissions.</li><li>• We have signed an agreement to divest our LNG business and will amend the baseline data for our supply chain and energy trading target.</li><li>• We will gradually reduce our gas trading towards 2032 and will not renew or enter into new, long-term gas-purchase agreements.</li><li>• We launched a programme to work with suppliers to reduce emissions in the offshore wind supply chain.</li><li>• We offset our air travel emissions from 2019 and onwards by planting mangrove trees and purchasing verified carbon credits. For these offsetting activities, we have partnered with Natural Capital Partners.</li><li>• We have strengthened the sustainability criteria in our procurement tenders to reduce the carbon impact of the goods and services we purchase. This year, we completed tenders for furniture, PCs, taxi services, and car rentals.</li></ul>	Our progress	<ul style="list-style-type: none"><li>• In the UK, we commissioned the world's largest offshore wind farm, Hornsea 1, and started the construction of Hornsea 2.</li><li>• In Europe, we officially inaugurated the offshore wind farm Borkum Riffgrund 2 in Germany. We started construction on Borssele 1 &amp; 2 in the Netherlands.</li><li>• We were awarded two large-scale projects in the US (Ocean Wind in New Jersey and Sunrise Wind in New York). We now have 5.0GW of awarded capacity in the US, Germany, and Taiwan, cementing our global leadership position.</li><li>• In Taiwan, we inaugurated phase 2 of Formosa 1, Taiwan's first-ever commercial-scale offshore wind farm, and began building the offshore wind farm Changhua 1 &amp; 2a.</li><li>• We are on track to meet our target of 15GW installed offshore wind capacity by 2025.</li><li>• We launched an industry coalition with Equinor to scale up ocean-based renewable energy. It is a response to the call to action of the High-Level Panel for a Sustainable Ocean Economy.</li></ul>	<ul style="list-style-type: none"><li>• We expanded our US portfolio through acquisitions and investment decisions on onshore projects.</li><li>• We commissioned the onshore wind farm Lockett in Texas.</li><li>• We acquired a 103MW construction-ready onshore wind farm in South Dakota.</li><li>• We made the decision to build a 420MW solar PV project as part of our Permian Energy Center in Texas, consisting of 1.3 million solar panels. This farm can deliver power to 100,000 people.</li><li>• We set a target to reach 5GW installed onshore energy generation capacity by 2025. We are on track to meet this target.</li></ul>																																								
Actions to become future-fit	Achieve carbon neutrality in our energy generation and operations (scope 1-2) by 2025.	Achieve carbon neutrality across our total carbon footprint, including energy generation and operations, supply chain, and energy trading (scope 1-3) by 2040.	Actions to become future-fit	Work with international organisations, national stakeholders, and sector initiatives to accelerate the global green energy build-out.																																									
Our governance	Accountability lies with Group Executive Management.	Accountability lies with Group Executive Management.	Our governance	Accountability lies with the Executive Vice President (EVP) of our Offshore business unit.	Accountability lies with the EVP of our Onshore business unit.																																								
Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Sustainability commitment</li><li>• ESG performance report: Section 2.7</li></ul>	<ul style="list-style-type: none"><li>• ESG performance report: Section 2.8</li></ul>	Policy and link to more information	<ul style="list-style-type: none"><li>• ESG performance report: Section 2.1</li><li>• Annual report pages 43-46</li></ul>	<ul style="list-style-type: none"><li>• ESG Performance report: Section 2.1</li><li>• Annual report pages 47-48</li></ul>																																								
International frameworks of reference	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• Greenhouse Gas Protocol &amp; Science Based Targets initiative</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• Greenhouse Gas Protocol &amp; Science Based Targets initiative</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>	International frameworks of reference	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>																																								
SDG contribution	13: We will become carbon neutral to help limit climate change.	13: We reduce our indirect carbon emissions across our entire carbon footprint to help limit climate change.	SDG contribution	7.2: We increase the share of renewable energy in the global energy mix.	7.2: We increase the share of renewable energy in the global energy mix.																																								
Indicators and targets	<div><div><b>Green energy share (%)</b></div><table><caption>Green energy share (%)</caption><tr><th>Year</th><th>Value</th></tr><tr><td>2006</td><td>17</td></tr><tr><td>2018</td><td>75</td></tr><tr><td>2019</td><td>86</td></tr><tr><td>2025 target</td><td>99</td></tr></table></div> <div><div><b>Carbon intensity (g CO<sub>2</sub>e/kWh)</b></div><table><caption>Carbon intensity (g CO<sub>2</sub>e/kWh)</caption><tr><th>Year</th><th>Value</th></tr><tr><td>2006</td><td>462</td></tr><tr><td>2018</td><td>131</td></tr><tr><td>2019</td><td>65</td></tr><tr><td>2025 target</td><td>10</td></tr></table></div> <div><div><b>Carbon emissions (scope 3) (MtCO<sub>2</sub>e)</b></div><table><caption>Carbon emissions (scope 3) (MtCO<sub>2</sub>e)</caption><tr><th>Year</th><th>Value</th></tr><tr><td>2018</td><td>36.2</td></tr><tr><td>2019</td><td>34.6</td></tr><tr><td>2032 target</td><td>18.1</td></tr></table></div> <div><div><b>Indicators and targets</b></div></div> <div><div><b>Installed offshore wind capacity (GW)</b></div><table><caption>Installed offshore wind capacity (GW)</caption><tr><th>Year</th><th>Value</th></tr><tr><td>2018</td><td>5.6</td></tr><tr><td>2019</td><td>6.8</td></tr><tr><td>2025 target</td><td>15</td></tr></table></div> <div><div><b>Installed onshore wind and solar capacity (GW)</b></div><table><caption>Installed onshore wind and solar capacity (GW)</caption><tr><th>Year</th><th>Value</th></tr><tr><td>2018</td><td>0.8</td></tr><tr><td>2019</td><td>1.0</td></tr><tr><td>2025 target</td><td>5</td></tr></table></div>	Year	Value	2006	17	2018	75	2019	86	2025 target	99	Year	Value	2006	462	2018	131	2019	65	2025 target	10	Year	Value	2018	36.2	2019	34.6	2032 target	18.1	Year	Value	2018	5.6	2019	6.8	2025 target	15	Year	Value	2018	0.8	2019	1.0	2025 target	5
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2025 target	5																																												

Programme overview	5 Greener combined heat and power plants	6 Green energy integration	Programme overview	7 Financing green																																				
Societal challenge	<b>Green energy deployment</b>  As coal is the most widely used source of power and the most carbon-intensive fossil fuel, it must be phased out to limit climate change.	<b>Green and reliable energy system</b>  New technologies that can help balance supply and demand of green energy and that use green power to decarbonise industry must be deployed to fully decarbonise the world's energy use.	Societal challenge	<b>Sustainable finance</b>  According to the IPCC, the world must invest USD 2.4 trillion in clean energy every year towards 2035, representing about 2.5% of global GDP, to stop global warming at 1.5°C.																																				
Our approach	We phase out coal from our combined heat and power (CHP) plants in Denmark. We replace coal with certified sustainable biomass or close down coal-fired capacity.	We deploy battery storage solutions with some of our green energy projects. We also explore solutions to produce renewable hydrogen to displace fossil fuels in sectors that are difficult to electrify, such as heavy industry and transport.	Our approach	We aim to only use green financing instruments starting in 2019 and going forward to progress our green transformation and continue the global build-out of renewable energy. These instruments include green bonds or green loans. We are co-founders of the Corporate Forum on Sustainable Finance and members of the Green Bond Principles.																																				
Our progress	<ul style="list-style-type: none"><li>• We have converted six of our seven central CHP plants.</li><li>• In 2019, we completed the conversion of Asnæs Power Station to run on sustainable biomass. The new biomass unit generated first power in November.</li><li>• The last remaining coal-fired CHP plant, located in Esbjerg, will be closed by 1 April 2023 at the latest. This is later than originally anticipated due to a decision by the Danish Energy Agency to allow the municipality of Esbjerg longer time to build a replacement plant. Consequently, our target to use zero coal by 2023 had to be amended. Instead, we will fully stop using coal from 1 April 2023 at the latest.</li></ul>	<ul style="list-style-type: none"><li>• We took the decision to integrate a 40MW storage facility into the design of our Permian Energy Center. This enables us to store energy generated by the solar farm for up to one hour.</li><li>• In 2019, we have grown our renewable hydrogen business in the following ways:<ul style="list-style-type: none"><li>– In the UK, we began a green hydrogen feasibility study to develop the delivery of low-cost, zero-carbon hydrogen at scale. We have also created the first ever UK fuel-trading contract for green hydrogen certificates.</li><li>– In Denmark, we have entered an agreement with five partners to build a 2MW electrolysis plant including hydrogen storage, called H2RES. Green power will be used to produce renewable hydrogen to power 20-30 buses, and it will also be tested in lorries and taxis.</li></ul></li></ul>	Our progress	<ul style="list-style-type: none"><li>• We issued green senior bonds of GBP 900m and NTD 12bn as well as a green hybrid bond of EUR 600m, adding to our EUR 750m green senior bond and EUR 500m green hybrid bond, both issued in 2017.</li><li>• We established a green revolving credit facility of NTD 25bn with 15 banks in Taiwan. This was the first time Taiwanese state-owned banks were involved in financing offshore wind.</li><li>• We launched a new 'Green finance framework' to support our aim to use only green financing instruments going forward.</li><li>• We continued implementing the TCFD recommendations, including conducting a scenario analysis.</li></ul>																																				
Actions to become future-fit	Successfully phase out coal in 2023 and substitute the use of natural gas and oil with sustainable alternatives.	Apply the right mix of renewable energy technologies for each project to maximise project effectiveness.	Actions to become future-fit	Continue to only use green financing instruments for all our future financing.																																				
Our governance	The EVP of our Markets & Bioenergy business unit is accountable for the conversion of our heat and power plants.	Accountability for storage projects lies with the EVP of our Onshore business unit. For hydrogen projects, it lies with the EVP of our Offshore business unit.	Our governance	Accountability for green financing lies with our CFO. Our Sustainability Committee approves allocation of green bond proceeds.																																				
Policy and link to more information	<ul style="list-style-type: none"><li>• ESG performance report: Sections 2.4 and 2.10</li></ul>	<ul style="list-style-type: none"><li>• ESG performance report: Section 2.1</li></ul>	Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Green finance framework</li><li>• Green bonds investor letter 2019</li><li>• CICERO green finance framework second opinion 2019</li></ul>																																				
International frameworks of reference	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>	<ul style="list-style-type: none"><li>• Paris Agreement</li><li>• IPCC Special Report: Global Warming of 1.5°C</li></ul>	International frameworks of reference	<ul style="list-style-type: none"><li>• Green Bond Principles (ICMA)</li><li>• Green Loan Principles (ICMA)</li><li>• EU Action Plan on Sustainable Finance</li><li>• TCFD recommendations</li></ul>																																				
SDG contribution	7.2: We increase the share of renewable energy in the global energy mix.	9.4: We develop and adopt a greater range of clean and environmentally sound technologies.	SDG contribution																																					
Indicators and targets	<b>Coal consumption</b> (thousand tonnes)  <table><tr><th>Year</th><th>Coal consumption (thousand tonnes)</th></tr><tr><td>2018</td><td>1.2</td></tr><tr><td>2019</td><td>0.6</td></tr><tr><td>2023 target</td><td>0</td></tr></table>	Year	Coal consumption (thousand tonnes)	2018	1.2	2019	0.6	2023 target	0	<b>Installed storage capacity</b> (MWac)  <table><tr><th>Year</th><th>Installed storage capacity (MWac)</th></tr><tr><td>2018</td><td>1</td></tr><tr><td>2019</td><td>20</td></tr><tr><td>Total</td><td>21</td></tr></table>	Year	Installed storage capacity (MWac)	2018	1	2019	20	Total	21	Indicators and targets	<div><b>Green financing proceeds allocated to offshore wind projects</b> (DKK billion) <table><tr><th>Year</th><th>Green financing proceeds (DKK billion)</th></tr><tr><td>2017</td><td>1.6</td></tr><tr><td>2018</td><td>6.1</td></tr><tr><td>2019</td><td>10.2</td></tr><tr><td>Total</td><td>17.9</td></tr></table></div> <div><b>Avoided emissions from allocated green bond proceeds</b> (million tonnes CO<sub>2</sub>e) <table><tr><th>Year</th><th>Avoided emissions (million tonnes CO2e)</th></tr><tr><td>2017</td><td>0.2</td></tr><tr><td>2018</td><td>0.8</td></tr><tr><td>2019</td><td>1.1</td></tr><tr><td>Total</td><td>2.1</td></tr></table></div>	Year	Green financing proceeds (DKK billion)	2017	1.6	2018	6.1	2019	10.2	Total	17.9	Year	Avoided emissions (million tonnes CO2e)	2017	0.2	2018	0.8	2019	1.1	Total	2.1
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Total	2.1																																							

## Implementing TCFD recommendations

Over the past two years, we have assessed the impact that climate change can have on the resilience of our business by implementing the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

A climate scenario analysis was the most important action identified in the initial gap analysis of Ørsted's implementation of the recommendations. In 2019, we conducted this climate analysis focusing on risks in our offshore wind business, which generated 87% of our EBITDA. As we have transformed our business model from fossil fuel-based to green, it was most relevant to focus the analysis on physical climate risks than on transition risks.

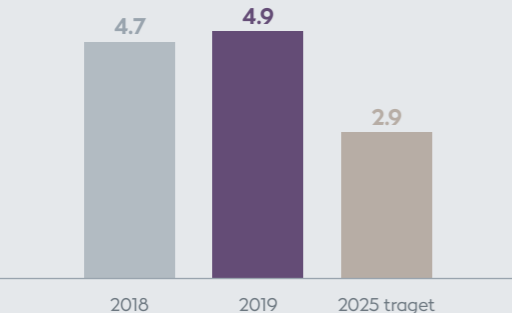
Two scenarios were considered: 1.5-2°C and 3-4°C temperature rises. In both scenarios, Ørsted is well positioned to manage potential physical impacts, such as changes to wind patterns, sea conditions or precipitation, and extreme temperatures. This is because we can gradually factor climate change resilience into the engineering design of each new project.

To strengthen climate governance, we have introduced climate KPIs for the Executive Board (CEO and CFO), tying their cash-based incentive scheme to Ørsted's share of green energy and carbon-emission reductions.

The TCFD recommendations are helping us to continuously improve our understanding of climate-related financial risks and opportunities and disclose it in a useful way to our investors. As such, the recommendations can guide companies towards running more climate-resilient businesses, while also helping investors allocate capital in a manner that supports the green transition.

Read more about our work to align with TCFD recommendations in our annual report.

Programme overview	8 Sourcing of certified sustainable biomass	9 Protecting biodiversity	Programme overview	10 Local communities	11 Resource management																								
Societal challenge	<b>Biomass sustainability</b>  To ensure significant carbon savings compared to coal, the wooden biomass used for energy generation must meet strict sustainability criteria.	<b>Biodiversity impacts and changes to ecosystems; use of the ocean and land for green energy</b>  The ocean is Earth's largest ecosystem and its overuse affects biodiversity, coastal communities, and economic activities.	Societal challenge	<b>Local socio-economic impacts</b>  Communities expect renewable energy companies to support local job creation and socio-economic development.	<b>Reuse and recycling of materials</b>  Reducing, reusing, and recycling waste materials are necessary to limit the impact on natural resources and lower carbon emissions.																								
Our approach	We document the sustainability of our wooden biomass through independent, third-party certification, in line with the Danish industry agreement on sustainable wooden biomass. We only source biomass from sustainably managed production forests with ongoing reforestation. The wood pellets and chips we use are made from residues. Most often, these residues are tree tops, branches, and sawdust from the regular thinning of forests, or diseased or crooked trees.	We avoid and reduce impacts on ocean ecosystems throughout the development, construction, and operation of all our offshore wind farms. To do so, we undertake detailed environmental investigations and impact assessments. We engage in dialogue with relevant stakeholders and collaborate to identify best-practice on how key species and natural habitats can be protected in the future build-out of offshore wind farms.	Our approach	We engage in an open and structured dialogue with stakeholders in the communities where we operate. Our projects vary in nature from market to market and so do the expectations of regulators, NGOs, community groups, and suppliers. We therefore implement a range of initiatives, including community benefit funds, apprenticeships and scholarships, and work with local supplier development.	We work to reduce waste and, where possible, eliminate hazardous waste by improving waste data monitoring and reporting, incorporating stricter requirements in contracts, and integrating a circular design into site waste management processes.																								
Our progress	<ul style="list-style-type: none"><li>• We are on track to reach our goal of 100% certified sustainable biomass sourced by 2020, and we will maintain this level going forward.</li><li>• 96% of the wooden biomass we sourced this year has been independently certified as sustainable in accordance with the Danish industry agreement on sustainable wooden biomass.</li><li>• We report annually on the biomass feedstock types we use, countries of harvest, and the carbon emissions from production and transport to ensure transparency of our approach. The report is available online.</li></ul>	<ul style="list-style-type: none"><li>• We contributed to establishing the UN Global Compact (UNGC) Principles for sustainable oceans and have become a signatory to them. We also joined the UNGC Action Platform for Sustainable Ocean Business.</li><li>• We are taking a major part in the development of regional multi-stakeholder groups in Europe to enable the further co-existence of offshore wind with marine industries and nature.</li><li>• In the UK, three offshore wind cables pass through a special area of conservation, designated for the critically endangered European eel. We carry out detailed environmental consenting processes and ongoing environmental monitoring to ensure such species are carefully considered.</li><li>• Our wind farm Brock Island is located in an area where the endangered North Atlantic right whale and the vulnerable fin whale are found. We therefore sail and operate in compliance with the US Marine Mammal Protection Act.</li><li>• We work closely with relevant stakeholders to understand key species and to ensure we use best available evidence and knowledge to protect marine mammals and their habitats.</li></ul>	Our progress	<ul style="list-style-type: none"><li>• We engage with key stakeholder groups on an ongoing basis. Examples of 2019 engagement:<ol style="list-style-type: none"><li>1. Local suppliers: We continue to support the establishment of a US-based offshore wind industry, e.g. through an agreement to develop Maryland's first offshore wind staging centre for construction logistics and wind farm assembly.</li><li>2. Fishers: Together with other developers, we designed a wind turbine layout that safeguard corridors for fishing boats across all New England lease areas.</li><li>3. Education: We developed an apprenticeship programme with DaYeh University in Taiwan to train future operations and maintenance technicians.</li><li>4. NGOs: We started executing our action plan for the North Atlantic cod, as part of our Borssele 1 &amp; 2 offshore wind project.</li><li>5. Local community and minority groups: We co-hosted the cleaning of the wetland reserves in Changhua, Taiwan, and sponsored the Ørsted Great Grimsby, UK, 10km run.</li></ol></li></ul>	<ul style="list-style-type: none"><li>• We developed internal company-wide policies and processes for waste and water management and are now working to define targets.</li><li>• We continued to improve waste data quality through more frequent on-site visits and training, as well as requiring monthly reporting from all sites.</li><li>• We incorporated stricter requirements on hazardous waste in new tenders, including in offshore operations and in facility management.</li><li>• We redesigned processes at Avedøre Power Station to reduce the waste for incineration from the use of biomass for energy generation. As a result, the efficiency rate of biomass has increased and waste disposed of for incineration has decreased significantly.</li><li>• All our fully operational sites work in accordance with ISO 14001.</li></ul>																								
Actions to become future-fit	Based on an upcoming scientific study of biomass in the Danish energy system, strengthen the tools used to ensure short carbon-payback time of the wooden biomass we use.	Improve knowledge of the potential cumulative biodiversity impacts of a fast, global build-out of offshore wind.	Actions to become future-fit	Enhance our approach for early-stage engagement with local communities on new projects.	Collaborate with relevant industries to improve blade-recycling technologies and establish circular-focused decommissioning plans for our offshore wind farms.																								
Our governance	The EVP of our Markets & Bioenergy business unit is accountable for our policy and programme. Implementation lies with our Fuels & Logistics department.	The heads of our four Offshore market regions are accountable for our Biodiversity policy. Environmental specialists support implementation through the lifetime of our offshore wind farms.	Our governance	The heads of our four Offshore market regions and our Onshore EVP are accountable for progress regarding stakeholder and local community engagement. Public and regulatory affairs in the respective markets are responsible.	The EVP of quality, health, safety, and environment (QHSE) is accountable for waste management. The QHSE Committee oversees progress, while implementation is carried out by the business units with support from the QHSE department.																								
Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Sustainable biomass policy</li><li>• ESG performance report: Sections 2.4 and 2.10</li><li>• Status report for sustainable biomass (only in Danish)</li></ul>	<ul style="list-style-type: none"><li>• Ørsted Offshore wind biodiversity policy</li><li>• ESG performance report: Sections 2.13-2.15</li></ul>	Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Stakeholder engagement policy</li><li>• Ørsted Local community engagement policy</li></ul>	<ul style="list-style-type: none"><li>• Ørsted Quality, health, safety, and environment policy</li><li>• ESG performance report: Section 2.12</li></ul>																								
International frameworks of reference	<ul style="list-style-type: none"><li>• EU Renewable Energy Directive</li><li>• Convention on Biological Diversity</li><li>• Danish industry agreement on sustainable wooden biomass</li></ul>	<ul style="list-style-type: none"><li>• The EU Birds and Habitats Directive</li><li>• UN 2020 Aichi Biodiversity Targets</li><li>• UNGC Sustainable Ocean Principles</li></ul>	International frameworks of reference		<ul style="list-style-type: none"><li>• The EU Directive on waste 2008/98</li></ul>																								
SDG contribution	15.2: We minimise our potential negative impacts on forests and promote sustainable forest management.	14.2 and 15.5: We work to mitigate our impacts on marine and coastal ecosystems and take action to halt the loss of biodiversity and natural habitats.	SDG contribution	8.3, 8.5 and 11.A: We support decent job creation and positive economic, social and environmental development of local communities in the markets where we operate.	12.4 and 12.5: We work to minimise our waste levels, including hazardous waste, and ensure responsible management of waste that cannot be recycled or reused.																								
Indicators and targets	<b>Certified sustainable wooden biomass sourced (%)</b>   <table><tr><th>Year</th><th>Percentage (%)</th></tr><tr><td>2018</td><td>83</td></tr><tr><td>2019</td><td>96</td></tr><tr><td>2020 target</td><td>100</td></tr></table>	Year	Percentage (%)	2018	83	2019	96	2020 target	100	<b>Red-List species recorded in areas with Ørsted offshore operations (number)</b>   <table><tr><th>Category</th><th>Number</th></tr><tr><td>Critically endangered</td><td>1</td></tr><tr><td>Endangered</td><td>1</td></tr><tr><td>Vulnerable</td><td>6</td></tr><tr><td>Near-threatened</td><td>8</td></tr></table>	Category	Number	Critically endangered	1	Endangered	1	Vulnerable	6	Near-threatened	8	Indicators and targets	<b>Local community engagement</b>   <p>Local suppliers   Education   NGOs</p> <p>Fishers   Local community and minority groups</p>	<b>Total amount of recycled waste (excl. oil-containing wastewater) (%)</b>   <table><tr><th>Year</th><th>Percentage (%)</th></tr><tr><td>2018</td><td>77</td></tr><tr><td>2019</td><td>84</td></tr></table>	Year	Percentage (%)	2018	77	2019	84
Year	Percentage (%)																												
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Year	Percentage (%)																												
2018	77																												
2019	84																												

Programme overview	12 Workplace safety								
Societal challenge	<p><b>Safety, health and well-being</b></p> <p>Valuing and protecting personal safety can positively influence the welfare of communities where businesses operate.</p>								
Our approach	<p>We strive to create a safe workplace for employees, contractors, and visiting suppliers, and work to achieve best-in-class safety. We are moving towards a proactive approach where we actively search for improvement points and incorporate learnings in cooperation with contractors to embed safety in our workplace culture.</p>								
Our progress	<ul style="list-style-type: none"><li>Unfortunately, in 2019, we experienced a contractor fatality. The last time we experienced a fatality was in 2012.</li><li>We are rolling out the QHSE culture programme, Plan Care Communicate, in the areas of our business with the highest risks of incidents. We are focusing on five dimensions:<ul style="list-style-type: none"><li>Taking decisions based on relevant and valid data</li><li>Having and following adequate and clear processes</li><li>Assessing risk and acting accordingly</li><li>Growing a culture of continuous improvement</li><li>Influencing our supply chain</li></ul></li><li>All our fully operational sites operate in accordance with ISO 45001.</li></ul>								
Actions to become future-fit	<p>Continue to embed QHSE in our working culture through joint efforts with our contractors and suppliers.</p>								
Our governance	<p>The EVP of QHSE is accountable for safety, while the QHSE Committee oversees the progress. The Health &amp; Safety management team is responsible for the overall implementation of our safety management systems.</p>								
Policy and link to more information	<ul style="list-style-type: none"><li>Ørsted Quality, health, safety, and environment policy</li><li>ESG performance report: Section 3.4</li><li>Annual report, pages 10, 49-51</li></ul>								
International frameworks of reference	<ul style="list-style-type: none"><li>ISO 45001</li></ul>								
SDG contribution	<p>8.8: We contribute to safe working environments through our safety approach and targets.</p>								
Indicators and targets	<p><b>Total recordable injury rate (TRIR)</b> (per million hours worked)</p>  <table><thead><tr><th>Year</th><th>TRIR</th></tr></thead><tbody><tr><td>2018</td><td>4.7</td></tr><tr><td>2019</td><td>4.9</td></tr><tr><td>2025 target</td><td>2.9</td></tr></tbody></table>	Year	TRIR	2018	4.7	2019	4.9	2025 target	2.9
Year	TRIR								
2018	4.7								
2019	4.9								
2025 target	2.9								

A tragic workplace accident

In 2019, Ørsted experienced its first fatal workplace accident in seven years. An employee of one of our contractors died in a serious accident while cleaning a silo at the Avedøre Power Station in Denmark. We have been – and still are – deeply affected by his death, and have been in close contact with his relatives, the contractor, and our own employees to offer support and assistance.

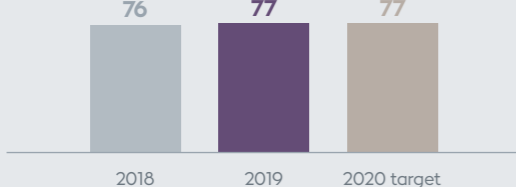
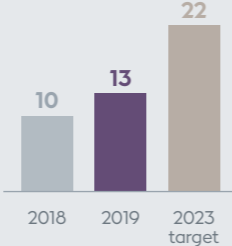
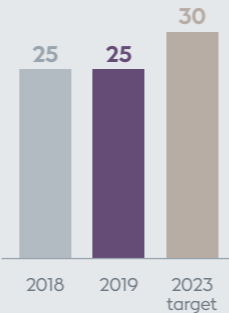
Following the accident, an independent investigation was conducted, and improvement measures implemented. These measures include additional digital and manual inspection methods before entering silos and improved safety procedures to ensure that plants, machines, and silos are safe before any work takes place.

Safety has the highest priority at Ørsted. We have been working to continuously measure our safety performance and act on both the actual and the potential severity of all registered injuries. As a result, we have significantly improved the safety performance of employees, contractors, and suppliers working on our sites over the past decade. This is reflected in our improved TRIR score, which has gone from 11.3 in 2010 to 4.9 in 2019. This means that we have reduced the number of incidents entailing medical treatment or which result in absence, per working hour, by more than half.

But even one accident is one too many. We need to stay vigilant to prevent accidents of any type occurring, to ensure that Ørsted is a safe workplace for our employees, contractors and suppliers alike.

In late 2019, we unfortunately also experienced a traffic accident involving an Ørsted employee in a company van where a member of the public was tragically killed. We are deeply saddened by this accident.

Programme overview	13 Employee health and well-being	14 Employee development																
Societal challenge	<p><b>Safety, health, and well-being</b></p> <p>Personal health and well-being are fundamental drivers in securing a balanced life and enabling good employee performance and engagement.</p>	<p><b>Employee development and retention</b></p> <p>As global competition for the best talents grows, businesses must improve in the development and retention of existing talents and engage new talents from different backgrounds.</p>																
Our approach	<p>We implement a holistic approach to physical, social and psychological health and mental well-being at work through our framework Ørsted Life. We train and support managers in science-based stress prevention, and we use data and research to develop health and well-being initiatives. We offer our employees access to a range of services and activities that can be implemented during the working day.</p>	<p>We have built a culture of continuous development, with individual development as a starting point. Development opportunities are provided through on-the-job experience, networks, and formal learning. We provide digital and in-person learning opportunities for all employees through the Ørsted Academy. Additionally, we have tailored high-potential programmes for selected early-career talents, senior specialists, managers, and executives.</p>																
Our progress	<ul style="list-style-type: none"><li>• This year, more than 3,000 of our employees have made use of readily available health and well-being services, including fitness, vitality, and stress-prevention offerings.</li><li>• More than 2,000 of our office-based employees have participated in initiatives promoting physical activity during the working day.</li><li>• We introduced an initiative to have our employees learn techniques to recharge their brain, and prevent stress and fatigue.</li><li>• We strengthened means of addressing bullying and harassment with an updated whistleblower hotline for employees, suppliers, and communities.</li></ul>	<ul style="list-style-type: none"><li>• We published our first Learn every day and High potential development catalogues to inform employees on development opportunities.</li><li>• We launched eight talent pipelines with key talent and capability-based forums sponsored by executive and senior vice presidents.</li><li>• We increased our investment in the Ørsted Academy, both in-person and digitally.</li><li>• We gathered 400 senior managers from all Ørsted locations for a day-long conference entitled Powered by talent, where we presented our talent development ambition and explained their role in implementing it.</li></ul>																
Actions to become future-fit	<p>Develop digital services for health and well-being and gather health data across locations.</p>	<p>Continue the capability-building of managers and support employees to take ownership of their own development.</p>																
Our governance	<p>Accountability lies with our Chief Human Resources Officer.</p>	<p>Accountability for our talent strategy lies with the Executive Committee, while the People &amp; Development team spearhead the implementation.</p>																
Policy and link to more information	<ul style="list-style-type: none"><li>• ESG performance report: Section 3.1</li></ul>	<ul style="list-style-type: none"><li>• ESG performance report: Section 3.1</li></ul>																
International frameworks of reference	<ul style="list-style-type: none"><li>• WHO Healthy workplaces: A model for action</li><li>• NIOSH Total Worker Health</li></ul>																	
SDG contribution	<p>3.4: We work to promote mental health and mental well-being.</p>																	
Indicators and targets	<p><b>Employees experiencing stress (%)</b></p>  <table><tr><th>Year</th><th>Stress (%)</th></tr><tr><td>2017</td><td>9.4</td></tr><tr><td>2018</td><td>9.7</td></tr><tr><td>2019</td><td>9.4</td></tr></table>	Year	Stress (%)	2017	9.4	2018	9.7	2019	9.4	<p><b>Employee learning and development</b> (index 0-100)</p>  <table><tr><th>Year</th><th>Index</th></tr><tr><td>2018</td><td>76</td></tr><tr><td>2019</td><td>77</td></tr><tr><td>2020 target</td><td>80</td></tr></table>	Year	Index	2018	76	2019	77	2020 target	80
Year	Stress (%)																	
2017	9.4																	
2018	9.7																	
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2019	77																	
2020 target	80																	

Programme overview	15 Employee satisfaction	16 Employee diversity and inclusion		Programme overview	17 Good business conduct																							
Societal challenge	<b>Employee development and retention</b>  Satisfied employees are more likely to thrive in the workplace, leading to higher motivation.	<b>Diversity and equal opportunity</b>  Respecting diversity and promoting an inclusive workplace culture can help encourage and value personal differences.	<b>Engaging youth in the fight against climate change</b>  As the future leaders, children and youth will play an important role in ensuring sustainable societies. When they hear about climate change and extreme weather events on the news today, it can create confusion, worry, and even fear. We must replace this with knowledge and optimism about how we can fight this global challenge and the solutions we already have. It is critical that children understand the impacts on our planet and feel empowered to take the action needed to preserve our planet.  That is why, in addition to engaging girls in STEM careers, Ørsted is engaging school children in climate literacy education. We have developed a number of initiatives to educate children on climate change and the actions they can take to help preserve it.  In 2019, we published a children’s book titled ‘Is this my home?’ This book was meant as a tool to help parents start talking about climate change with their young children. It was published in Danish, English, Taiwanese, and German. Through our partnership with WWF Denmark, we also developed a range of school teaching materials to support climate literacy in primary school. Over 3,000 school classes across Denmark have requested the material for use in classes.  Finally, we joined forces with astronauts from around the world to create a virtual reality Space Safari. We believe that if more people experience Earth like astronauts do, it will create a greater sense of responsibility for our shared home and help inspire climate action.	Societal challenge	<b>Business ethics and transparency</b>  Corruption, bribery, and other fraudulent practices can impact society by destabilising institutions and undermining fair business competition.																							
Our approach	We measure employee satisfaction and motivation through an annual employee engagement survey to ensure they can thrive in their working environment. We measure the perception of Ørsted as a workplace, including daily tasks, workload, and relationships with managers. The responses are used to identify actions at manager, department, and company level.	We promote, encourage, and advocate for a culture where different perspectives are valued and leveraged, and where it is safe to speak up. To do so, we set clear expectations of all managers and leaders in terms of their role. We also integrate diversity in the Ørsted recruitment process, including a requirement to select diverse candidates, and we engage with relevant industry organisations.		Our approach	We prohibit all forms of bribery, corruption, and kickbacks, given or received, whether direct or indirect. We promote compliance internally and with our business partners through due diligence, training, and reporting of misconduct, including through our whistleblower hotline. We conduct country risk assessments and business partner due diligence through our ‘Know your counterparty’ programme. When we engage with authorities and political stakeholders, we follow regulations and our stakeholder engagement policy.																							
Our progress	<ul style="list-style-type: none"><li>• We achieved our 2020 target a year early, as our overall satisfaction and motivation ticked up from 76 to 77.</li><li>• This result places us in the top 10% among peer benchmarking companies. It is our target to remain among the top 10%.</li><li>• 94% of our employees have responded to the 2019 survey, providing a strong foundation for the results.</li></ul>	<ul style="list-style-type: none"><li>• We increased the representation of women in the Leadership Conference, which comprises of our top-100 managers. We maintained the proportion of women in middle management.</li><li>• For our high-potential talent programmes, we set a 30% target for female representation.</li><li>• In the UK, we played a central role in the UK Offshore Wind Sector deal, which commits the industry to move from 16% women in 2019 to a minimum of 33% by 2030. To enable this, Ørsted UK sponsors initiatives to build diversity champions, promote learning and engagement, and establish employee networks for women, LGBT+, BAME, and disability groups.</li><li>• In Denmark, our staff acts as Ørsted science, technology, engineering and mathematics (STEM) troops to engage school girls with STEM careers.</li><li>• For the second year in a row, we were official sponsors of Copenhagen Pride.</li></ul>		Our progress	<ul style="list-style-type: none"><li>• We updated our policy on ‘Good business conduct’ to include best practice across all markets where we operate. Awareness campaigns on the updated policy are ongoing.</li><li>• We updated the ‘Know your counterparty’ screening programme to further strengthen our risk-based due diligence process for business partners in mergers and acquisitions, joint ventures, and other partnerships.</li><li>• We are conducting on-site compliance trainings across all Ørsted sites.</li><li>• We ensure compliance with relevant regulations, including GDPR.</li></ul>																							
Actions to become future-fit	Our Group Executive Management to continue to engage directly with our organisation, so all employees understand how their work contributes to our global company vision.	Continue the capability-building of managers. Partner with external organisations to progress the agenda in the industry.		Actions to become future-fit	Ensure our Good business conduct policy stays up to date and covers the challenges in the new markets we enter.																							
Our governance	Accountability lies with the Chief Human Resources Officer. Group Executive Management and the Cooperation Committee, comprising of employee represantives, oversee the results of the satisfaction survey. Our People & Development function conducts the survey and oversees improvement actions.	Accountability lies with our Chief Human Resources Officer. Implementation of diversity and inclusion and women in management initiatives is led by our People & Development team.		Our governance	Our Board of Directors has approved our good business conduct policy. Accountability for the policy lies with our Chief Legal Officer, while our in-house legal team is responsible for day-to-day implementation, with support from compliance officers in our business units.																							
Policy and link to more information	<ul style="list-style-type: none"><li>• ESG performance report: Section 3.1</li></ul>	<ul style="list-style-type: none"><li>• Ørsted Global diversity and inclusion policy</li><li>• ESG performance report: Sections 3.2 and 3.3</li></ul>	Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Good business conduct policy</li><li>• Ørsted Stakeholder engagement policy</li><li>• ESG performance report: Section 4.4</li></ul>																								
International frameworks of reference		<ul style="list-style-type: none"><li>• UN Convention on Discrimination Against Women</li><li>• UN LGBTI Standards of Conduct for Business</li></ul>	International frameworks of reference	<ul style="list-style-type: none"><li>• Anti-corruption regulations in the countries where we operate, including the UK Bribery Act and the US Foreign Corrupt Practices Act.</li></ul>																								
SDG contribution		5.5: We work to ensure women’s full and effective participation and equal opportunities for all in the workplace.	SDG contribution	16.5: We strive to help tackle corruption and bribery through due diligence, training, compliance, and misconduct reporting.																								
Indicators and targets	<b>Employee satisfaction</b> (scale 0-100)  We aim to remain in the top 10% in a benchmark of peer companies.   <table><tr><th>Year</th><th>Score</th></tr><tr><td>2018</td><td>76</td></tr><tr><td>2019</td><td>77</td></tr><tr><td>2020 target</td><td>77</td></tr></table>	Year	Score	2018	76	2019	77	2020 target	77	<b>Women in Leadership Conference (%)</b>  <table><tr><th>Year</th><th>Percentage</th></tr><tr><td>2018</td><td>10</td></tr><tr><td>2019</td><td>13</td></tr><tr><td>2023 target</td><td>22</td></tr></table> <b>Women in middle management (%)</b>  <table><tr><th>Year</th><th>Percentage</th></tr><tr><td>2018</td><td>25</td></tr><tr><td>2019</td><td>25</td></tr><tr><td>2023 target</td><td>30</td></tr></table>		Year	Percentage	2018	10	2019	13	2023 target	22	Year	Percentage	2018	25	2019	25	2023 target	30	Indicators and targets  <b>Substantiated whistleblower cases</b> (number)  23  <b>Substantiated cases transferred to the police</b> (number)  10  20182019
Year	Score																											
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2019	77																											
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Year	Percentage																											
2018	25																											
2019	25																											
2023 target	30																											

Programme overview	18 Responsible business partners programme								
Societal challenge	<b>Business partner conduct</b>  Labour and human rights, corruption, and environmental risks in the supply chain must be managed to mitigate impacts on workers, communities, and the natural environment.								
Our approach	We have more than 22,000 suppliers, and we work to ensure that they follow international standards for responsible business as outlined in our Code of conduct (CoC) for business partners. As part of our procurement, we follow four steps: <ul style="list-style-type: none"><li>• Suppliers commit to our Code.</li><li>• We conduct risk screenings to identify suppliers for further engagement based on spend, country, and category risks.</li><li>• We do on-site visits to assess conformity with our Code.</li><li>• We agree on improvements plans with suppliers and follow up through dialogue and further assessments.</li></ul>								
Our progress	<ul style="list-style-type: none"><li>• We have conducted 439 supplier screenings and 38 assessments in 2019.</li><li>• While most of our suppliers perform at a high level, we have identified some risks. They include temporary workers with contracts that, in practice, prevent employment termination due to debt bondage, withholding of migrant worker passports, suppliers with insufficient working hour management systems, and excessive overtime. All have been addressed satisfactorily by our suppliers.</li><li>• We rolled out an early engagement approach in new high-risk markets. We conduct site assessments prior to contract signing to strengthen supplier commitment to performance improvements.</li><li>• We implemented an anti-harassment approach for vessel suppliers with a focus on sexual harassment and bullying.</li></ul>								
Actions to become future-fit	Address social challenges in the mineral and metal supply chains.								
Our governance	Accountability lies with the Head of Stakeholder Relations, who also chairs the Responsible Business Partner (RPP) Steering Committee. The Committee has approved our Code for business partners. Implementation is carried out by our RPP team in collaboration with procurement officers.								
Policy and link to more information	<ul style="list-style-type: none"><li>• Ørsted Code of conduct for business partners</li><li>• UK Modern Slavery Act statement</li><li>• ESG performance report: Section 4.5</li></ul>								
International frameworks of reference	<ul style="list-style-type: none"><li>• ILO Core Conventions</li><li>• UN GP on Business and Human Rights</li><li>• OECD Guidelines for MNEs</li><li>• UK Modern Slavery Act and UK Bribery Act</li></ul>								
SDG contribution	8.7, 8.8, and 16.5: We seek to minimise potential negative impacts on labour rights, modern slavery, safety, corruption, and bribery in our supply chains.								
Indicators and targets	<b>Business partner due diligence</b> (numbers)   <table><tr><th>Category</th><th>Value</th></tr><tr><td>CoC screenings</td><td>439</td></tr><tr><td>CoC assessments</td><td>38</td></tr><tr><td>CoC improvement actions opened</td><td>120</td></tr></table>	Category	Value	CoC screenings	439	CoC assessments	38	CoC improvement actions opened	120
Category	Value								
CoC screenings	439								
CoC assessments	38								
CoC improvement actions opened	120								

Programme overview	19 Information and cyber security	20 Responsible tax practices
Societal challenge	<b>Information security and cyberattacks</b>  With growing cyber-security threats, businesses must increase efforts to protect critical infrastructure and information assets.	<b>Responsible tax</b>  By paying tax and supporting international tax reform, companies contribute to the development of the societies where they operate, the creation of well-functioning tax systems and stable institutions conducive of business.
Our approach	We work to ensure the security of corporate information and critical infrastructure through a risk-based approach and in close collaboration with our business partners. We provide tailored compliance support and training and awareness to our partners, so they are able to incorporate and apply security measures in their daily operations.	We are transparent in our tax reporting and voluntarily disclose country-specific information about our tax position in our annual report. We aim to comply not only with the letter of the law, but also the underlying intent to ensure that we pay the right amount of tax, on time, in the countries where we operate. We engage in dialogue with stakeholders and cooperate with the authorities in the markets where we operate to support effective tax systems.
Our progress	<ul style="list-style-type: none"><li>• We carried out global campaigns to promote secure behaviour in the workplace, ongoing phishing simulations and communications, and customised awareness events for certain employee groups.</li><li>• We developed a new impact assessment method to better measure the impact of cyber risks throughout the company. In 2019, we used this new method to assess all our information and operational technology applications.</li><li>• We implemented a new information security e-learning for all employees and consultants.</li></ul>	<ul style="list-style-type: none"><li>• We continued to publish country-by-country data on our tax positions in the annual report, page 120.</li><li>• We participated in the Tax Dialogues, a roundtable of businesses, investors, and NGOs on tax and corporate responsibility, led by Oxfam-Ibis in Denmark.</li><li>• We engaged in public consultation to support the development of legislation on international tax affairs and transparency. This year, we provided feedback on the Danish proposal to introduce new CFC legislation and updates on the TP legislation (L48), and on the OECD proposals regarding Pillar I and Pillar II.</li><li>• In the annual survey published by the Danish financial news media company Økonomisk Ugebrev, we were recognised as the most sustainable company on tax matters among the top 100 Danish companies.</li></ul>
Actions to become future-fit	Continue to monitor and assess current and emerging cyber-security threats and ways to adequately adapt and respond to protect our assets.	To meet increasing compliance and reporting requirements, we are to maintain focus on transparency and accountability in tax payments and reporting.
Our governance	Accountability lies with the Chief Information Security Officer. Our Information Security Board oversees the progress of the information security project portfolio.	Accountability lies with our CFO. Our Board of Directors has approved the Responsible tax policy. Our global tax team manages the daily implementation of the policy.
Policy and link to more information		<ul style="list-style-type: none"><li>• Ørsted Global tax policy</li><li>• ESG performance report: Section 4.4</li><li>• Annual report pages 115-124</li></ul>
International frameworks of reference	<ul style="list-style-type: none"><li>• International standards, including ISF Framework, NIST, and IEC 62443.</li><li>• Regulatory requirements in the countries where we operate, including EU NIS and NERC CIP.</li></ul>	<ul style="list-style-type: none"><li>• OECD BEPS</li><li>• EU Directives, e.g. ATAD, DAC6</li><li>• Applicable local and international tax legislation</li></ul>
SDG contribution		16.6: We seek to contribute to effective, accountable and transparent tax institutions at all levels.
Indicators and targets	<b>Secure workplaces</b>  We carry out ongoing, global campaigns for secure behaviour in the workplace.  	<b>Global corporate income tax paid in 2019</b> (DKK billion)  

Sustainability programmes overview

In addition to our key contribution to SDGs 7 and 13, we impact more SDGs through our sustainability programmes.

The table provides a summary overview of our sustainability programmes, including the impact on SDGs, the societal challenges addressed, indicators and targets where relevant, and our performance in 2019. The programmes are grouped in three categories.

	SDG	SDG contribution	Societal challenge	Ørsted programme	Indicator	Target	Performance 2019
To align our business with climate science	13	We will become carbon neutral to help limit climate change.	Climate action Energy efficiency	1. Decarbonisation of energy generation and operations (scope 1-2)	Green energy share (%) Carbon intensity (g CO <sub>2</sub> e/kWh) Share of electric vehicles (%) Green power for own consumption (%) Energy savings (GWh)	2025: 99 2025: 10 2025: 100 2019: 100 2022: 15 Carbon neutral by 2025	86 65 21 100 8.8
	13	We reduce our indirect carbon emissions across our entire carbon footprint to help limit climate change.	Climate action	2. Decarbonisation of supply chain and energy trading (scope 3)	Reduced carbon emissions (%)	2032: 50 Carbon neutral by 2040	4
	7.2	We increase the share of renewable energy in the global energy mix.	Green energy deployment	3. Deployment of offshore wind	Installed offshore wind capacity (GW)	2025: 15	6.8
	7.2	We increase the share of renewable energy in the global energy mix.	Green energy deployment	4. Deployment of onshore renewable energy	Installed onshore wind and solar capacity (GW)	2025: 5	1.0
	7.2	We increase the share of renewable energy in the global energy mix.	Green energy deployment	5. Greener combined heat and power plants	Coal consumption (thousand tonnes)	2023: Stop use of coal	0.6
	9.4	We develop and adopt a greater range of clean and environmentally sound technologies.	Green and reliable energy systems	6. Green energy integration	Installed storage capacity (MWac)		21
			Sustainable finance	7. Financing green	Green financing proceeds allocated to offshore wind projects, total (DKK billion) Avoided emissions from allocated green bond proceeds, total (million tonnes CO <sub>2</sub> e)	We aim to use green financing instruments in all future financing, starting in 2019.	17.9 2.1
To address potential impacts of the green energy transformation	15.2	We minimise our potential negative impacts on forests and promote sustainable forest management.	Biomass sustainability	8. Sourcing of certified sustainable biomass	Certified sustainable wooden biomass sourced (%)	2020: 100	96
	14.2 15.5	We work to mitigate our impacts on marine and costal ecosystems and take action to halt the loss of biodiversity and natural habitats.	Biodiversity impacts and changes to ecosystems Use of the ocean and land for green energy	9. Protecting biodiversity	Red-List species recorded in areas with Ørsted offshore operations (number): <ul style="list-style-type: none"><li>• Critically endangered</li><li>• Endangered</li><li>• Vulnerable</li><li>• Near-threatened</li></ul>		1 1 6 8
	8.3 8.5 11.A	We support decent job creation and positive economic, social and environmental development of local communities in the markets where we operate.	Local socio-economic impacts	10. Local communities	We engage in dialogue with stakeholders and invest in community development funds, skill-based initiatives, and local supplier development.		
	12.4 12.5	We work to minimise our waste levels, including hazardous waste, and ensure responsible management of waste that cannot be recycled or reused.	Reuse and recycling of materials	11. Resource management	Total amount of recycled waste (excl. oil-containing wastewater) (%)		84
To ensure responsible business practices	8.8	We contribute to safe working environments through our safety approach and targets.	Safety, health, and well-being	12. Workplace safety	TRIR per million hours worked (number) Fatal accidents (number)	2025: 2.9	4.9 1
	3.4	We work to promote mental health and mental well-being.	Safety, health, and well-being	13. Employee health and well-being	Employees experiencing stress (%)		9.4
			Employee development and retention	14. Employee development	Employee learning and development (index 0-100)	2020: 80	77
			Employee development and retention	15. Employee satisfaction	Employee satisfaction (index 0-100)	2020: 77	77
	5.5	We work to ensure women's full and effective participation and equal opportunities for everyone in the workplace.	Diversity and equal opportunity	16. Employee diversity and inclusion	Women in leadership positions (%) <ul style="list-style-type: none"><li>• Leadership Conference</li><li>• Middle management</li></ul>	2023: 22 2023: 30	13 25
	16.6	We strive to help tackling corruption and bribery through due diligence, training, compliance, and misconduct reporting.	Business ethics and transparency	17. Good business conduct	Substantiated whistleblower cases (number) Substantiated cases transferred to the police (number)		3 0
	8.7 8.8 16.5	We seek to minimise potential negative impacts on labour rights, modern slavery, safety, corruption, and bribery in our supply chains.	Business partner conduct	18. Responsible business partners programme	CoC screenings (number) CoC assessments (number) CoC improvement actions opened (number)		439 38 120
			Information security and cyberattacks	19. Information and cyber security	We carry out ongoing, global campaigns for secure behaviour in the workplace.		
	16.6	We seek to contribute to effective, accountable and transparent tax institutions at all levels.	Responsible tax	20. Responsible tax practices	Global corporate income tax paid (billion DKK)		4.8

Sustainability governance



