## C0. Introduction

### C0.1

**(C0.1) Give a general description and introduction to your organization.**

# Already avoided the emission of more than 1.5 billion tonnes of $CO_2$

For 40 years, Vestas has operated in the field of wind power. Vestas has the wind industry's largest installed base of more than 132 GW of wind turbines in 83 countries - we have installed more wind power than anyone else. Every single project represents a journey in itself, helping us to mature the capabilities and know-how that we offer today to our business partners in order to widen wind energy's footprint across new territories. Through our industry-leading smart data capabilities and unparalleled 113 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 29,000 employees are bringing the world sustainable energy solutions to power a bright future.

With a vision to become the global leader in sustainable energy solutions, everything we do revolves around the development and deployment of sustainable energy solutions. Every day, our employees help to create a better world by designing, manufacturing, installing, developing, and servicing wind energy and hybrid projects all over the world. With 132 GW of wind turbines installed in 83 countries, our sustainable energy solutions have already avoided the emission of more than 1.5 billion tonnes of $CO_2$ into the atmosphere and contributed to a more sustainable energy system. We have more than four decades of experience in wind energy and were the first company to reach the 100 GW landmarks for both the installation and service of wind turbines. As such, we believe we have already played a crucial role in laying the foundations for the sustainable era, and that we are uniquely positioned to show the path to a sustainable planet. Wind energy is our heritage and core competence. We believe wind will form the backbone of the sustainable energy systems of the future, and we remain focused on developing solutions that accelerate the energy transition and strengthen Vestas' continued leadership in wind.

At Vestas, sustainability is grounded in our four corporate values: simplicity, collaboration, accountability and passion. Sustainability at Vestas means reducing or eliminating negative environmental and social impacts, as well as maximising the value that our business and products provide for our customers, employees, shareholders, suppliers, local communities, and the planet at large. It also means upholding sustainability in governance structures. We believe these efforts will help to elevate the standards of our industry as a whole.

***"At Vestas, sustainability is the business we are in, it's one of the key purposes that our more than 29.000 employees come to work every day - to make the world a more sustainable place. Now - with the Vestas Sustainability Strategy, we are embedding sustainability into everything we do as we become the global leader in sustainable energy solutions"***

**Henrik Andersen, Group President & CEO at Vestas.**

### C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

| | Start date | End date | Indicate if you are providing emissions data for past reporting years | Select the number of past reporting years you will be providing emissions data for |
|---|---|---|---|---|
| Reporting year | January 1 2020 | December 31 2020 | No | <Not Applicable> |

### C0.3

**(C0.3) Select the countries/areas for which you will be supplying data.**

Argentina
Australia
Austria
Brazil
Bulgaria
Canada
Chile
China
Denmark
Finland
France
Germany
Greece
India
Ireland
Italy
Japan
Jordan
Kenya
Mexico
Mongolia
Morocco
Netherlands
New Zealand
Norway
Philippines
Poland
Portugal
Republic of Korea
Romania
Senegal
South Africa
Spain
Sweden
Taiwan, Greater China
Thailand
Turkey
Ukraine
United Kingdom of Great Britain and Northern Ireland
United States of America
Uruguay
Viet Nam

## C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

EUR

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

# C1. Governance

## C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

## C1.1a

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

| Position of individual(s) | Please explain |
|---|---|
| Board Chair | The board chair together with the full board holds the overall responsibility for the company's duties being executed including selection and focus on mid-term priorities also known as "must win battles". One of the selected must win battles is linked to sustainability including the climate strategy. It is the board chairs duty to ensure that all decisions to be made by the combined Board are discussed at the board meetings after a potential evaluation in the Technology & Manufacturing Committee that among other duties assist the Board of Directors by reviewing information under the area "Monitor and evaluate sustainability" As an example the board on October 7th 2019 discussed an approved the overall sustainability strategy including very ambitious climate reduction targets for making Vestas climate neutral in own operations by 2030 and to reduce carbon emission in the supply chain (scope 3) by 45 % per MWh delivered to the market. However, given the nature of Vestas' products climate change is a natural part of many dialogues in the board and its three committees: the Audit Committee, the Technology & Manufacturing Committee, and the Nomination & Compensation Committee. All members of these committees are elected by the Board from among its members. The purpose of these board committees is to prepare decisions and recommendations for consideration and approval by the entire Board. The committees are not authorised to make independent decisions; instead, they report and make recommendations to the Board. The Audit Committee regularly evaluates climate risks as part of its work related to systems of internal controls including risk management systems and the Technology & Manufacturing Committee evaluates the overall sustainability performance including performance against climate reduction targets as part of their responsibility. The board was updated on sustainability strategy priority projects and progress on Sept 29, 2020 and the Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on Oct 19, 2020. Furthermore, the Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on April 20, 2021. Since the approval of the sustainability strategy in Oct 2019, the BoD has been updated on CO2 reduction progress every quarter as part of the strategy KPI reporting to the BoD. |

## C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate-related issues are integrated | Scope of board-level oversight | Please explain |
|---|---|---|---|
| Scheduled – all meetings | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Reviewing and guiding annual budgets<br>Reviewing and guiding business plans<br>Setting performance objectives<br>Monitoring implementation and performance of objectives<br>Overseeing major capital expenditures, acquisitions and divestitures<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable> | Reviewing, setting performance objectives, monitoring and overseeing is all part of the governance mechanisms into which climate-related issues are integrated. As an example the board in February 2020 discussed an approved the overall sustainability strategy including very ambitious climate reduction targets for making Vestas climate neutral in own operations by 2030 without the use of carbon offsets and to reduce carbon emission in the supply chain (scope 3) by 45 % per MWh delivered to the market. The board is on a quarterly basis updated on performance towards the set climate related targets as part of the overall KPI reporting and information to the board. The data is collected from Vestas sites and once a year the scope 3 calculation is updated. To secure transparency most of the data are made publicly available as part of the Quarterly information towards the financial market as part of our Quarterly announcements. 12 board meetings were conducted in 2020 and four meetings in the Audit Committee as well as four meetings in the Technology & Manufacturing Committee were conducted. The board was updated on sustainability strategy priority projects and progress on Sept 29, 2020 and the Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on Oct 19, 2020. Furthermore, the Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on April 20, 2021. |

## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

| Name of the position(s) and/or committee(s) | Reporting line | Responsibility | Coverage of responsibility | Frequency of reporting to the board on climate-related issues |
|---|---|---|---|---|
| Chief Executive Officer (CEO) | <Not Applicable> | Assessing climate-related risks and opportunities | <Not Applicable> | More frequently than quarterly |

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Sustainability including the climate strategy have by the board of directors been selected a mid-term priority also known as a "must win battle". The Group President and CEO has taken leadership of this sustainability must win battle and created a sustainability strategy department as part of the CEO office. The sustainability strategy department is anchored in the MarCom, Sustainability & Public Affairs part of the CEO office and the Head of Sustainability is reporting directly to the Group President and CEO on a monthly basis.

The Group President and CEO follows the sustainability and climate related activities closely and decides on implementation projects e.g. linked to scope 1 and 2 reductions and which initiatives will need a decision at level of board of directors. Furthermore, the Group President and CEO has delegated to our Sustainability Strategy department the responsibility for preparing and coordinating our sustainability strategy. In close collaboration with our functional areas, the department also drives and supports the execution of the strategy.

To effectively implement sustainability across the organisation, we have appointed sustainability leads for each area of the business. In close collaboration with the Sustainability Strategy department, these individuals define action plans and resource allocation to support the achievement of our sustainability goals and targets within their business area. In addition, individual departments are responsible for specific global policies, procedures and overall guidance related to sustainability. Health, safety and environment are managed by the Global Quality, Safety & Environment (QSE) department, while corporate social responsibility and business ethics are managed by the Legal, Risk & Compliance department. To further embed sustainability within our governance structures, in 2020 we appointed Module Sustainability Leads (for example, for nacelles, blades, towers). These Module Leads will work to achieve reductions in carbon emissions and waste for specific turbine parts.

The Vestas Sustainability Committee is created to support the Group President and CEO and the Sustainability Strategy department in prioritizing, overseeing, and coordinating cross-functional sustainability initiatives including climate related initiatives across the entire organisation, while ensuring we uphold our responsibilities as Signatories to the UN Global Compact. It is essential that the Committee represents Vestas in its entirety, so each member speaks for their respective function or department. The following functions are represented in the Committee: Investor Relations, Compliance & CSR, Sustainability Strategy, People & Culture, Service, Sales, Procurement, Quality, Safety & Environment, and Power Solutions. The Committee held a total of nine meetings in 2020.

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

| | Provide incentives for the management of climate-related issues | Comment |
|---|---|---|
| Row 1 | Yes | |

## C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

| Entitled to incentive | Type of incentive | Activity inventivized | Comment |
|---|---|---|---|
| Chief Executive Officer (CEO) | Monetary reward | Emissions reduction target | The Vestas bonus program is linked to: EBIT margin, Free Cash Flow, Revenue and internal production matters. The performance on the key KPIs is to a high degree linked to dealing with and solving climate change issues true sales and service of our wind turbines onshore and offshore. Furthermore, a solid link is created via our sustainability linked loan agreement where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned. Via the solid link to our sustainability linked loan agreement our Science Based Targets Initiative approved climate change mitigation targets for scope 1+2+3 are linked to the overall bonus targets. |
| Chief Financial Officer (CFO) | Monetary reward | Emissions reduction target | The Vestas bonus program is linked to: EBIT margin, Free Cash Flow, Revenue and internal production matters. The performance on the key KPIs is to a high degree linked to dealing with and solving climate change issues true sales and service of our wind turbines onshore and offshore. Furthermore, a solid link is created via our sustainability linked loan agreement where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned. Via the solid link to our sustainability linked loan agreement our Science Based Targets Initiative approved climate change mitigation targets for scope 1+2+3 are linked to the overall bonus targets. |
| Business unit manager | Non-monetary reward | Supply chain engagement | Vestas has established a sustainability committee consisting of all relevant business unit managers. The sustainability committee reports to the Vestas President & CEO who again reports to the board of directors. Climate change in the supply chain is of high focus and the constant improvement with suppliers is part of the recognition and acknowledgement of sustainability committee and GSVP, Global Procurement. Suppliers need to commit to change and are also recognized for doing so. |

# C2. Risks and opportunities

## C2.1

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

## C2.1a

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

| | From (years) | To (years) | Comment |
|---|---|---|---|
| Short-term | 0 | 1 | Vestas has determined risks with potential impact below 1 year as short-term risk. This is aligned with overall Enterprise Risk Management (ERM) definitions |
| Medium-term | 1 | 3 | Vestas has determined risks with potential impact within 1-3 years as medium-term risk. This is aligned with overall Enterprise Risk Management (ERM) definitions |
| Long-term | 3 | | Vestas has determined risks with a potential and adverse negative strategic impact in 2-3 year or later as long-term strategic risks. This is aligned with overall Enterprise Risk Management (ERM) definitions |

## C2.1b

**(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

Vestas uses a Group Risk Matrix that combines likelihood and financial EBIT bottom line impact to determine the substantive impact of risks both before and after mitigation action have been carried out.

Likelihood is grouped as:

1) Rare - Probability <10%

2) Low - Probability 10-25%

3) Possible - Probability 25-50%

4) Likely - Probability 50-75%

5) Almost Certain - Probability >75%

At the same time financial EBIT bottom line impact is used to scale the risk and four additional qualitative measures (Regulatory/compliance, Environment, Reputation and Safety) is guiding when the potential impact is considered of non-financial nature first and foremost. The Enterprise Risk Management (ERM) setup is a global setup for all business units and risks are collected and assessed 3 times a year of which one focuses on strategic risks.

Financial and reputational impacts are defined as:

1) Very Low - 1-15 million EUR impact or very limited reputation damage across few stakeholders

2) Low - 15-40 million EUR impact or limited reputational damage across some stakeholders

3) Medium - 40-75 million EUR impact or significant reputational damage across numerous stakeholders

4) High - 75-125 million EUR impact or severe reputational damage across a majority of stakeholders

5) Very high - >125 million EUR impact or irreversible or catastrophic reputational damage across all stakeholders

Enterprise risks are those with an assessed likelihood as likely and above and with a potential impact ranging from high to very high.

Strategic risks are also reported using the Group Risk Matrix and are defined as;

*Future uncertainties - internal as well as external - that have potential to significantly negatively impact our ability to achieve Vestas' long-term vision. I.e. risks that have:*

- *Substantial negative impact on Vestas*
- *A reasonable likelihood of materializing*
- *Potential to impact Vestas long term*
- *A requirement for executive attention*

## C2.2

**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

**Value chain stage(s) covered**
Direct operations
Upstream
Downstream

**Risk management process**
Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**
More than once a year

**Time horizon(s) covered**
Short-term
Medium-term
Long-term

**Description of process**
Enterprise Risk Management (ERM) at Vestas is a continuous process for identifying, assessing, managing and monitoring risks across the group. All parts of the organisation are involved in the ERM process. This ensures a comprehensive risk identification and assessment and provides reassurance that all relevant risks are covered such as strategic, operational, financial, legal & compliance. Twice a year selected risk officers across the organisation - both in Vestas' Regions and in group functions – facilitate a process to identify and report a view on short-term and medium-term risks including climate related risks. In addition, once a year a similar process is run with focus on long-term strategic risks. The risk reporting covers identification, assessment and response plans (mitigation actions) to the risks. Key risks are reported to the group Enterprise Risk Management function for further analysis, discussion with input providers and consolidation. Based on this work the Risk Committee is engaged in accordance with the annual ERM wheel which implies 4 annual meetings at the Risk Committee. The Risk Committee is headed by the Chief Financial Officer and consist of all Executive Vice Presidents to Vestas. Group ERM facilitates the meetings and drives meeting agendas based on risk themes identified by the ERM process. Conclusion and actions are defined. Bi -annually, the Board of Directors (BoD) receives an ERM reporting. The BoD is ultimately responsible for ensuring adequate risk management at Vestas. The BoD Audit Committee independently reviews the adequacy and effectiveness of risk management systems and internal controls across Vestas. As mentioned climate related risks are an integrated part of the above mentioned prioritisation process. However, in 2021 a focused climate scenario risk assessment has been conducted to further identify climate related risks and opportunities as input for the continuous process for identifying, assessing, managing and monitoring risks across the group. The scenario work analysed both scenarios where higher ambitions are driving down climate emissions rapidly and status quo scenarios. The IEA Sustainable development scenario (SDS) and the IEA Net Zero Emission by 2050 (NZE2050) scenarios have been used for the rapidly driving down of climate emissions assessment. They are both backward engineered scenarios investigating how meeting energy-related Sustainable Development Goals including the Paris agreement (well below 2°C) or the net-zero emissions by 2050 could be done. More transitional risks were discovered in this process and evaluated on financial impact as per the guidance laid out in more detail in C2.1b. A significant transactional risk identified is linked to expected increasing climate emission costs e.g. due to further limitation on free EU ETS allocations or other political market interventions to limit climate emissions. Vestas operates a unique supply chain with an approximately 10 million ton CO2 impact resulting in substantive financial impacts at even low increases in the CO2 prices. The risk is addressed through unique partnerships with selected suppliers e.g. a climate partnership with Hempel was announced in 2020 focused on CO2 reductions from painting Vestas produces. Initial calculations demonstrate that changing the processes surrounding the surface treatment application will potentially generate a 60 per cent reduction in CO2 emissions equal to 1,100 tonnes CO2e per year. The IEA Stated Policies Scenario (STEPS) service as a status quo scenario where temperature is continuing to raise towards an estimated + 2,7°C in 2100 compared to pre-industrial levels. This scenario revealed more physical climate risks that were also evaluated on financial impact as per the guidance laid out in more detail in C2.1b. More severe weather incidents are increasing the likelihood of supplier or own production interruption impacting capacity and potentially making it more difficult to deliver our products on time. This impact may also affect the transportation of our products to its final place of installation. Vestas has learned from the COVID-19 supply chain impact that cost impacts of production interruptions are likely in these unfortunate situations. Strategic suppliers therefore include climate mitigation as part of the ongoing dialog. 27 unique suppliers covering 30% of our material spend are currently enrolled in the climate program. The results of the continuous process and the 2021 climate scenario risk assessment is described in more detail in C2.3, C2.4, and C3.2.

## C2.2a

**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

| | Relevance & inclusion | Please explain |
|---|---|---|
| Current regulation | Relevant, always included | Current regulation is monitored by strategy functions, QSE and other parts of the organization where climate regulation could have a significant direct or indirect impact on business going forward. As an example we follow the EU Taxonomy setting requirements for many industries on expectations on climate performance to align with the taxonomy. This has been included in our climate-related risk assessment as we here see relevant thresholds indicating political expectations to reductions. |
| Emerging regulation | Relevant, always included | Emerging regulation is monitored by strategy functions, Governmental Affairs, QSE and other parts of the organisation. As the world leading wind turbine manufacturer, climate regulation has a very important impact on our business going forward and is therefore monitored closely and in collaboration with the wind associations where we take membership. Other examples are that we follow the development in the proposals for the Corporate Sustainability Reporting Directive (CSRD) or EU carbon border taxation, as this is coming regulation that could have significant direct or indirect impact. This has been included to secure that the transactional related risks are part of our assessment. |
| Technology | Relevant, always included | Technology is a key part of the transition into a less carbon intensive global energy system and 331M EUR were spent in 2020 primarily in Vestas Power Solutions (VPS), the R&D area of Vestas, to progress this transition. Both opportunities and risks are addressed by VPS. On the risk side evaluation of how wind turbine design best handle future weather conditions (extreme heat / cold, hurricanes, lightning etc.) can be mentioned as an example. This has been included in our climate-related risk assessment as part of the STEPS scenario work and mapped as a transitional risk. |
| Legal | Relevant, always included | Policy and legal risks are important areas of our climate related risk assessment and closely linked to our work on current and emerging regulation. As a leading wind turbine manufacturer, policy and legal implications could have significant impact on our business going forward. To provide an example of a policy and legal risk, the potential increase in carbon pricing could impact the supply chain and make the production of Vestas wind turbines more costly in the longer run. As part of our climate-related risk assessment this has also been further detailed out in C2.3. |
| Market | Relevant, always included | Market risks are monitored by strategic functions and procurement and as the market for wind turbines is generally seen very opportunistic e.g. as per Bloomberg New Energy Finance (BNEF)'s market outlook for global investments in wind the risks primarily relates to increased cost of raw materials. As an example, we see a risk of growing demand for specific raw materials as more focus on mitigating climate change will increase demand and thereby raw material costs. This potential shortage of raw materials could be further critical if used by net exporting countries as a geopolitical instrument and to satisfy domestic demand. This has been included in our climate-related risk assessment as part of the SDS and NZE2050 scenario work and mapped as a transitional risk. |
| Reputation | Relevant, always included | Reputational risks are monitored by strategic functions and are mainly linked to the wind turbine project installations and operation. The Vestas CSR team is working and collaborating with our customers to secure well planned and informed project initiation and execution. Vestas furthermore offers our customers a site Life Cycle Assessment (LCA) for environmental optimization of the individual project. This to minimize the environmental impact of the project as part of the planning of the full wind plant installation. An example of a reputational risk that has been included in our climate-related risk assessment as part of the SDS and NZE2050 scenario work and mapped as a transitional risk is where wind turbines would not be generating electricity due to lack of infrastructure (not to be provided by Vestas). In a drastically changing scenario, the risk of time differences in managing big infrastructure projects is seen more likely which could result in wind turbines not able to be connected to grid and sitting idle. |
| Acute physical | Relevant, always included | Acute physical risks are always covered and monitored by strategy functions, Procurement, QSE and other parts of the organization where increased severity of extreme weather events could impact our operations or customers installations. An example of acute physical risk that has been included in our climate-related risk assessment as part of the STEPS scenario work and mapped as a physical risk is the risk of Vestas operations or wind turbines being hit by extreme weather events such as e.g. high intensity lightning. |
| Chronic physical | Relevant, always included | Chronic physical risks are always covered and monitored by strategy functions, QSE and other parts of the organization where longer-term changes in precipitation patterns and extreme variability in weather patterns results in increased risks for Vestas and its business. An example of chronic physical risks for Vestas is shifting wind patterns which might impact the attractiveness of current and future investments in different regions. Some regions may become more attractive and others less attractive. Insecurity is normally not welcomed by investors and therefore this could impact the attractiveness of the investments in the future. This risk has been included in our climate-related risk assessment as part of the STEPS scenario work and mapped as a physical risk. |

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Upstream

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Emerging regulation | Carbon pricing mechanisms |

**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

With the Paris Agreement as the binding international treaty on climate change that was adopted at COP 21 in Paris, on 12th of December 2015 and entered into force on 4th of November 2016 with the goal to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. The Paris Agreement creates the foundation for a dramatic change of society that is expecting to pick up speed in this decade. To find the economically most viable way to the goal of the Paris Agreement more regions and counties have introduced carbon taxation e.g. the EU ETS and it is evaluated highly likely that more industries and countries will be impacted and higher prices on carbon emissions seen. With a unique supply chain carbon footprint of approximately 10Mt CO2 in 2020 and a current carbon price not reflecting the real cost of change needed to transition into a 1.5 degree scenario, the potential impact of increased carbon prices either market or politically motivated can have significant impact on price structure. Already in the first part of 2021 we have seen EU carbon price gaining 60% and according Bloomberg NEF News from May 2021 the market shows more traders are willing to bet on carbon prices almost doubling by the end of the year. (approximately 50 EUR up to hit 100 EUR mark). If this guides global expectations a carbon prices increase by 20-50 EUR/tCO2 would be seen likely which is estimated to potentially impact Vestas by 50M-125M EUR given a 25% uptake in the supply chain prices. As products are sold with delivery times of years and in a very competitive market it is only expected that a small part of the risk can be mitigated through higher prices towards customers. A solid climate strategy as part of the overall sustainability strategy has therefore been developed. The focus is to become carbon neutral in 2030 in our own operations without the use of carbon offsets and to reduce emission in the supply chain by 45% per MWh generated by 2030. The supply chain engagement has the biggest potential and the use of AI and reporting tools are part of the mitigation investment.

**Time horizon**
Medium-term

**Likelihood**
More likely than not

**Magnitude of impact**
Medium

**Are you able to provide a potential financial impact figure?**
Yes, an estimated range

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
50000000

**Potential financial impact figure – maximum (currency)**
125000000

**Explanation of financial impact figure**
To find the economically most viable way to the goal of the Paris Agreement, more regions and counties are expected to introduce carbon taxation (e.g. the EU ETS ) and it is evaluated highly likely that more industries and countries will be impacted and higher prices on carbon emissions will be seen. With a unique supply chain carbon footprint of approximately 10Mt CO2 in 2020 and a current carbon price not reflecting the real cost of change needed to transition into a 1.5 degree scenario the potential impact of increased carbon prices either market or politically motivated can have significant impact on price structure. Already in the first part of 2021 we have seen EU carbon price gaining 60% and according Bloomberg NEF News from May 2021 the market shows more traders are willing to bet on carbon prices almost doubling by the end of the year. (approximately 50 EUR up to hit 100 EUR mark). If this guides global expectations a carbon prices increased by 20-50 EUR/tCO2 would be seen likely which is estimated to potentially impact Vestas by 50M-125M EUR given a 25% uptake in the supply chain prices. The estimated 25% uptake is calculated since scope 3 to some extent is double counting emissions and that price elasticity and market competition will not allow the full price impact for increasing costs.

**Cost of response to risk**
30000000

**Description of response and explanation of cost calculation**
Integrating sustainability into everything we do is part of our vision of becoming the global leader in sustainable energy solutions. The last decade was the hottest on record ever, with temperatures on average 1.2°C above pre-industrialisation levels (WMO 2020). Simultaneously, in 2019 human activity was responsible for an all-time high in greenhouse gas emissions (UNEP 2019). The rapid decarbonisation of the global energy supply is critical to limit global warming to 1.5°C above pre-industrial levels. As a proven technology, wind energy offers one of the most effective solutions to fight the climate crisis and nurture wellbeing for all life on the planet. However, given the scope of the challenge, we know we cannot rely on the virtue of our product alone; to meet the growing expectations of our customers, partners, investors and employees, we need to do more. In 2020 we launched our sustainability strategy, Sustainability in Everything We Do and are now on track to become a fully sustainable company. We are working to improve our own environmental performance, create value for local communities, promote a safe, diverse and inclusive workplace, and lead the transition to a world powered by sustainable energy. To succeed in these ambitions, we are ramping up our efforts to integrate sustainability not only across our business, but throughout our operations and value chain. As the leading wind OEM for a sustainable change we have set ambitions targets to become carbon neutral company by 2030 without the use of climate offsets. On this journey, we will reduce carbon emissions from our own operations by 55 percent by 2025. As Vestas is committed to leading the transition to a world entirely powered by sustainable energy, we will not use carbon offsets to help us achieve carbon neutrality. Instead, we will reduce our carbon footprint through our own actions. Furthermore, we will reduce scope 3 impact by 45% per MWh generated. The SBTi has confirmed that Vestas' carbon neutrality target is in line with the efforts required to keep global warming to 1.5°C above pre-industrial temperature levels, granting Vestas the most ambitious designation available through the SBTi validation process. Sustainability activities planned for the coming years as part of the "Must Win Battle" Sustainably with a high focus on climate mitigation have been estimated to approximately 30 million EUR taking into consideration scope 1+2 activities as well as scope 3 activities.

**Comment**
No further comments

---

**Identifier**
Risk 2

**Where in the value chain does the risk driver occur?**
Direct operations

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Acute physical | Increased severity and frequency of extreme weather events such as cyclones and floods |

**Primary potential financial impact**
Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**
<Not Applicable>

**Company-specific description**
An international team of researchers led by the Potsdam Institute for Climate Impact Research (PIK) has at the end of 2019 quantified the actual benefits and downsides of three main roads to decarbonisation of the energy sector. They show that relying mainly on wind and solar would bring most co-benefits for the health of people and planet. The International Energy Agency (IEA), in its net-zero scenario, set out the terms of a "immediate and massive" renewables deployment that would quadruple last year's record-setting deployment. Growth in the supply chain is needed and Tommy Rahbek Nielsen, our chief operating officer (COO), sees the need for wind energy suppliers to ramp up annual installations from tens of gigawatts to the hundreds needed for a net-zero scenario. Ramping up the supply chain fast in an environment were more severe weather incidents increase the likelihood of supplier or own production interruption impacting capacity and potentially making it more difficult to deliver our products on time is seen a real climate related risk. This impact may also impact the transportation of our products to its final place of installation. Vestas has learned from the COVID-19 supply chain impact that cost impacts of production interruptions are likely. Not taking the expected supply chain growth into consideration a small uplift of production costs excluding staff costs and depreciations due to supply chain interruptions directly or due to transportation issues of 0,1% would result in a 115'000'000 EUR cost increase. With a rapid growing supply chain the potential cost of interruptions due to extreme weather events would only increase as the likelihood of severe incidences would increase as well. An 0,1% cost impact incident is seen a major event that would normally only happen once every 100 years. However, the changing frequency of extreme weather events such as cyclones and floods have already increased and based on this the likelihood of happing have been set to once every 50 years. This would result in annualized risk of 2'300'000 EUR.

**Time horizon**
Medium-term

**Likelihood**
More likely than not

**Magnitude of impact**
Medium-low

**Are you able to provide a potential financial impact figure?**
Yes, a single figure estimate

**Potential financial impact figure (currency)**
2300000

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
Vestas has learned from the COVID-19 supply chain impact that cost impacts of production interruptions are likely. Not taking the expected supply chain growth into consideration a small uplift of production costs excluding staff costs and depreciations due to supply chain interruptions directly or due to transportation issues of 0,1% would result in a 115'000'000 EUR cost increase. With a rapid growing supply chain, the potential cost of interruptions due to extreme weather events would only increase as the likelihood of severe incidences would increase as well. An 0,1% cost impact incident is seen a major event that would normally only happen once every 100 years. However, the changing frequency of extreme weather events such as cyclones and floods have already increased and based on this the likelihood of happing have been set to once every 50 years. This would result in annualized risk of 2'300'000 EUR.

**Cost of response to risk**
20000

**Description of response and explanation of cost calculation**
Is difficult to take site specific actions to prevent, however relevant teams in Vestas work on securing flexibility in the supply chain and securing dual sourcing. E.g. we have setup partnerships with suppliers on climate related issues to learn more and follow tends of impact. It is estimated that a sum of 20'000 EUR is spent on the learning and monitoring. This cost is expected to increase as we learn and better understand the potential supply chain impacts.

**Comment**
No further comments

---

**Identifier**
Risk 3

**Where in the value chain does the risk driver occur?**
Direct operations

**Risk type & Primary climate-related risk driver**

| | |
|---|---|
| Emerging regulation | Carbon pricing mechanisms |

**Primary potential financial impact**
Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**
<Not Applicable>

**Company-specific description**
With the Paris Agreement as the binding international treaty on climate change that was adopted at COP 21 in Paris with the goal to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. The Paris Agreement creates the foundation for a dramatic change of society that is expecting to pick up speed in this decade. To find the economically most viable way to the goal of the Paris Agreement more regions and counties have introduced carbon taxation like the EU ETS. The country and regional implementation of carbon taxation is likely to be implemented at different speeds initiating a potential need for carbon border taxation as a means to secure that workplaces, production and innovation in first moving countries and regions are supported in the uptake and transition to a low carbon economy. At EU level the Carbon Border Adjustment Mechanism has been discussed for some time and other similar regulation would be likely in other countries or regions. With Vestas' unique global setup the pure administrative burden of having additional employees monitoring and securing compliance has been estimated as it is still too early to calculate the impact of material/product import/export e.g. steel. The material import/export calculation is very difficult as regulation will need to be World Trade Organization (WTO) compliant and should also respect market competition e.g. within the renewable energy sector. Given the global scale 2-10 additional FTEs are estimated to be needed and with an average cost of around 65'000 EUR according to the 2020 Vestas remuneration report we see a cost uplift of 130'000 EUR to 650'000 EUR.

**Time horizon**
Long-term

**Likelihood**
More likely than not

**Magnitude of impact**
Medium

**Are you able to provide a potential financial impact figure?**
Yes, an estimated range

**Potential financial impact figure (currency)**
<Not Applicable>

**Potential financial impact figure – minimum (currency)**
130000

**Potential financial impact figure – maximum (currency)**
650000

**Explanation of financial impact figure**
With Vestas' unique global setup the pure administrative burden of having additional employees monitoring and securing compliance has been estimated at global scale to 2-10 additional resources. With an average cost of around 65'000 EUR according to the Vestas remuneration report 2020 we see a cost lift of 130'000 EUR to 650'000 EUR.

**Cost of response to risk**
10000

**Description of response and explanation of cost calculation**
It is difficult to take specific actions to prevent this risk, however relevant regulation is studied and commented as part of the ongoing global public affairs activities to secure that potential coming regulation is fair on competition and simple to implement and handle. The 10'000 EUR estimate is based on the estimated time used in Vestas and wind associations to follow this topic.

**Comment**
No further comments

## C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**
Yes

## C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**
Opp1

**Where in the value chain does the opportunity occur?**
Direct operations

**Opportunity type**
Products and services

**Primary climate-related opportunity driver**
Development and/or expansion of low emission goods and services

**Primary potential financial impact**
Increased revenues resulting from increased demand for products and services

**Company-specific description**
In 1979, Vestas sells and installs its first wind turbine ever – with a 10-metre rotor and a capacity of 30 KW. Early investing in new wind technology turns out to be a stroke of genius and today Vestas is the world leader in sustainable energy with a huge opportunity in the sustainable era that is seen characterised by unprecedented change to energy systems as well as societies at large. Entire industries and mobility systems will need to be electrified in order to take advantage of renewable energy sources, and as a result renewable energy sources will redefine how we produce, distribute, and use energy. As such, the entire planet is embarking on an industrial and societal transition never seen before, opening up new opportunities for value creation for sustainable companies. Today, electricity constitutes just 20 percent of the global energy system, and of this wind energy provides around 6 percent. With less than 2 percent of all energy coming from wind turbines, it is clear the growth potential for renewables is enormous. With global wind power capacity expected to grow on average 8 percent per year until 2030, and with our leading position in the industry, Vestas' core continues to revolve around wind and the accelerated deployment of renewable energy. Ensuring competitive and compatible wind energy solutions remains vital to a sustainable energy mix. Only by continuing to innovate superior solutions for wind power generation and the energy system surrounding we can we address the climate crisis and continue to grow our company. With power capacity expected to rise sixfold from 2019 to 2050, and with renewables expected to surge from 28 percent in 2019 to 69 percent in 2050, the growth opportunities are significant. In fact, this growth is expected to drive investments of around USD 11 trillion in renewables, of which USD 5.9 trillion will be invested in wind energy. Vestas is a market leader with +130GW installed capacity and +110GW under service. The fleet of installed wind turbines avoided 186 million tons of CO2 in 2020 and the full financial outlook for the company is linked to this unique Vestas climate change opportunity.

**Time horizon**
Short-term

**Likelihood**
Very likely

**Magnitude of impact**
High

**Are you able to provide a potential financial impact figure?**
Yes, a single figure estimate

**Potential financial impact figure (currency)**
500000000

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
The full Vestas 2021 outlook is linked to this climate change opportunity. The outlook in the annual report 2020 says: "Revenue for full-year 2021 is expected to range between EUR 16bn and 17bn, including service revenue, which is expected to grow approx. 15 percent. Vestas expects to achieve an EBIT margin before special items of

6-8 percent with a service EBIT margin of approx. 24 percent." With a 15% turnover growth a turnover of approximately 17'000'000'000 EUR can be calculated and with an average 7% EBIT the EBIT would be 1'190'000'000 EUR. In 2020 the EBIT ended at 698'000'000 EUR meaning an uplift of 492'000'000 EUR which have been rounding to 500'000'000 EUR. PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2021 outlook as given in the annual report 2020 and should NOT be seen as any further guidance to the market. PLEASE NOTE: This is only an estimation of the opportunity in 2021 based on the given guidance in the annual report 2020 and may be subject to change.

**Cost to realize opportunity**
1550000000

**Strategy to realize opportunity and explanation of cost calculation**
To change our planet's trajectory, the most cost-effective and immediate path to meaningful emissions reduction is large-scale deployment of renewable energy. However, as the penetration of renewable electricity increases, this alone will not be enough to avoid a temperature increase above 1.5 °C. We must therefore address the following three challenges: 1. Accelerate the deployment of renewable energy Wind and solar energy only account for around 9 percent of the global electricity generation mix today; it is therefore clear that the deployment of renewables needs to accelerate substantially for the world to stay within a 1.5 °C scenario. 2. Drive society-wide electrification Today, only certain elements of society are powered by electricity and renewable energy – in fact, only 20 percent of energy consumption is electricity. A key lever to creating a sustainable energy system is to drive electrification forward and ensure mobility, heating, and industries can be powered by electricity from renewables. 3. Implement solutions for non-electrifiable use In some industries and sectors electrification is not feasible anytime soon. However, Power-to-X and green hydrogen are well-known solutions that show great potential to address the challenges we face – for example, by helping to shift steel production and heavy transport to renewable energy sources. Vestas has the scale, reach, track record, and technological expertise to continue leading the buildout of renewable energy and the electrification of societies. Leveraging these qualities, our strategy revolves around three pillars: · Enabling electrification through low-cost renewable energy · Driving increased deployment of renewable energy · Pioneering new solutions to indirect electrification All cost and effort is devoted to this climate related opportunity and with a 15% increase in turnover and 500M EUR extra EBIT the cost invested in this upside can be calculated as turnover 2020 (14'819'000'000 EUR) * 0,15 = 2'223'000'000 EUR rounded to 2'200'000'000 - estimated EBIT of 500'000'000 EUR (as per above) = 1'700'000'000 EUR PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2021 outlook as given in the annual report 2020 and should NOT be seen as any further guidance to the market. PLEASE NOTE: This is only a estimation of the opportunity in 2021 based on the given guidance in the annual report 2020 and may be subject to change.

**Comment**
No further comments

---

**Identifier**
Opp2

**Where in the value chain does the opportunity occur?**
Direct operations

**Opportunity type**
Products and services

**Primary climate-related opportunity driver**
Development and/or expansion of low emission goods and services

**Primary potential financial impact**
Increased revenues resulting from increased demand for products and services

**Company-specific description**
The offshore wind market is expected to grow and Global Wind Energy Council (GWEC) Market Intelligence forecasts that through 2030, more than 205 GW of new offshore wind capacity will be added globally. This fantastic climate related opportunity is now fully integrated with Vestas after we and Mitsubishi Heavy Industries, Ltd. (MHI) signed an agreement that Vestas will acquire MHI's shares in the MHI Vestas Offshore Wind (MVOW) joint venture, against MHI acquiring 2.5 percent in Vestas and being nominated to a seat in Vestas' Board of Directors, thus strengthening the partnership within sustainable energy between the two companies. The acquisition took place at the end of 2020 and the projections as stated in our Annual Report for the offshore market suggest a development in three phases for Vestas' newly acquired offshore segment. Based on the order backlog, Vestas will see a couple of years with high activity levels and solid financial performance. Then, from 2023, the company expects to see a decline in activity towards 2025. These first two phases will be under the influence of heavy investments both in the organisation, supply chain, and technology. By 2025, when a steep increase in annual offshore installations is expected, and Vestas' new platform will be gaining traction in the market, Vestas aims to be a leading player in offshore wind power. Based on these assumptions, Vestas has an ambition to achieve revenue in the offshore segment of EUR +3bn by 2025, with an EBIT margin on par with the Group's overall margin. The numbers are based on information in Vestas annual report 2020.

**Time horizon**
Long-term

**Likelihood**
Very likely

**Magnitude of impact**
Medium-high

**Are you able to provide a potential financial impact figure?**
Yes, a single figure estimate

**Potential financial impact figure (currency)**
300000000

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
According to the Vestas annual report 2020 we see a revenue today for offshore around 1'400'000'000 EUR and the forecast for 2025 indicate +3'000'000'000 EUR. The group EBIT long-term outlook given in the Vestas annual report 2020 of at least 10% EBIT margin can be used to calculate an estimated EBIT of 300'000'000 EUR for 2025. The EBIT today is around zero making this a 300'000'000 EUR opportunity as profit is fully allocated to Vestas after the announced acquisition. PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2021 outlook as given in the annual report 2020 and should NOT be seen as any further guidance to the market. PLEASE NOTE: This is only an estimation of the long-term opportunity based on the given guidance in the annual report 2020 and may be subject to change.

**Cost to realize opportunity**
709000000

**Strategy to realize opportunity and explanation of cost calculation**
The projections as stated in our Annual Report for the offshore market suggest a development in three phases for Vestas' newly acquired offshore segment. Based on the order backlog, Vestas will see a couple of years with high activity levels and solid financial performance. Then, from 2023, the company expects to see a decline in activity towards 2025. These first two phases will be under the influence of heavy investments both in the organisation, supply chain, and technology. By 2025, when a steep increase in annual offshore installations is expected, and Vestas' new platform will be gaining traction in the market, Vestas aims to be a leading player in offshore wind power. Based on these assumptions, Vestas has an ambition to achieve revenue in the offshore segment of EUR +3bn by 2025, with an EBIT margin on par with the Group's overall margin. Vestas, and Mitsubishi Heavy Industries, Ltd. (MHI), signed an agreement that Vestas will acquire MHI's shares in the MHI Vestas Offshore Wind (MVOW) joint venture, against MHI acquiring 2.5 percent in Vestas and being nominated to a seat in Vestas' Board of Directors, thus strengthening the partnership within sustainable energy between the two companies. Vestas acquired MHI's 50 percent share of the MVOW joint venture against 5,049,337 shares in Vestas that will be issued at closing of the transaction, corresponding to 2.5 percent of Vestas' nominal share capital after the capital increase. The transaction has a value of approx. EUR 709m, based on the volume-weighted average of the price for shares in Vestas as quoted on Nasdaq Copenhagen the last five days up to and including the 28 of October 2020. This according the press release informing about the acquisition.

**Comment**
No further comments

---

**Identifier**
Opp3

**Where in the value chain does the opportunity occur?**
Direct operations

**Opportunity type**
Markets

**Primary climate-related opportunity driver**
Access to new markets

**Primary potential financial impact**
Increased revenues resulting from increased demand for products and services

**Company-specific description**
Developing renewable energy projects is a great climate related opportunity that Vestas has followed uniquely by investing in Copenhagen Infrastructure Partners, (CIP), the world's largest dedicated fund manager in greenfield renewable energy infrastructure. We have acquired a 25 percent minority stake in the investment management company. Through Vestas' investment in CIP, we aim to further expand our presence in renewable project development, and invest within areas of the renewables value chain that lie beyond our existing activities. This will see Vestas building a new pathway to value creation, whereby it will access the long-term returns generated by renewable energy projects. This value stream will encompass investment management and optimisation, including asset management and divestments, thereby increasing Vestas' presence along the energy value chain beyond the current co-development and early-stage investment in renewables projects. The investment also marks a key milestone in Vestas' overall growth journey, which includes an increased focus on development through the launch of a new dedicated development business unit. Through representation on the CIP board, Vestas will engage in discussions around the strategic direction of CIP, but will not be involved in decision making at fund, investment, or project level, including selection of wind turbine suppliers. Vestas will retain the flexibility to work with other parties on development projects, including other wind energy developers, utilities, and owners. The current value of CIP's Assets under Management (AUM) is estimated to around EUR 14bn, which the company aims at increasing to EUR 75-100bn by 2030.

**Time horizon**
Long-term

**Likelihood**
Very likely

**Magnitude of impact**
Medium-high

**Are you able to provide a potential financial impact figure?**
Yes, a single figure estimate

**Potential financial impact figure (currency)**
100000000

**Potential financial impact figure – minimum (currency)**
<Not Applicable>

**Potential financial impact figure – maximum (currency)**
<Not Applicable>

**Explanation of financial impact figure**
Vestas has invested in Copenhagen Infrastructure Partners, (CIP), the world's largest dedicated fund manager in greenfield renewable energy infrastructure, to acquire a 25 percent minority stake in the investment management company and has entered into an agreement with the investment management company Copenhagen Infrastructure Partners P/S (CIP), whereby Vestas will acquire a 25 percent minority stake in CIP's parent companies. The stake will be acquired at a price of 500'000'000 EUR, in the form of 180'000'000 EUR as upfront payment, and 320'000'000 EUR as an earnout. This is according to the press release informing about the acquisition. As stated in the Vestas annual report 2020 the financial outlook for Vestas' long-term Return Of Capital Employed (ROCE) is 20% which would result in a 100'000'000 EUR opportunity. (500'000'000EUR *20%) PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2021 outlook as given in the annual report 2020 and should NOT be seen as any further guidance to the market. PLEASE NOTE: This is only an estimation of the long-term opportunity based on the given guidance in the annual report 2020 and may be subject to change.

**Cost to realize opportunity**
500000000

**Strategy to realize opportunity and explanation of cost calculation**
Vestas has invested in Copenhagen Infrastructure Partners, (CIP), the world's largest dedicated fund manager in greenfield renewable energy infrastructure, to acquire a 25 percent minority stake in the investment management company and has entered into an agreement with the investment management company Copenhagen Infrastructure Partners P/S (CIP), whereby Vestas will acquire a 25 percent minority stake in CIP's parent companies. The stake will be acquired at a price of 500'000'000 EUR, in the form of 180'000'000 EUR as upfront payment, and 320'000'000 EUR as an earnout. This is according to the press release informing about the acquisition. Through Vestas' investment in CIP, we aim to further expand our presence in renewable project development, and invest within areas of the renewables value chain that lie beyond our existing activities. This will see Vestas building a new pathway to value creation, whereby it will access the long-term returns generated by renewable energy projects. This value stream will encompass investment management and optimisation, including asset management and divestments, thereby increasing Vestas' presence along the energy value chain beyond the current co-development and early-stage investment in renewables projects. The investment also marks a key milestone in Vestas'

overall growth journey, which includes an increased focus on development through the launch of a new dedicated development business unit. As part of the agreement, Vestas will invest into a new 'Energy Transition Fund' managed by CIP as an anchor investor. The fund will focus on nurturing Power-to-X and other technologies that can further increase the deployment of renewable energy across energy systems.

**Comment**
No further comments.

## C3. Business Strategy

### C3.1

**(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?**
Yes, and we have developed a low-carbon transition plan

### C3.1a

**(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?**

| | Is your low-carbon transition plan a scheduled resolution item at AGMs? | Comment |
|---|---|---|
| Row 1 | No, and we do not intend it to become a scheduled resolution item within the next two years | The AGM overall agenda looks as following: 1. The Board of Directors' report on the company's activities during the past year 2. Presentation and adoption of the Annual Report 3. Resolution for the allocation of the result of the year according to the adopted Annual Report 4. Presentation and advisory vote on the Remuneration Report 5. Approval of the Board of Directors' remuneration 6. Election of members to the Board of Directors 7. Appointment of auditor 8. Proposals from the Board of Directors 9. Authorisation of the chairman of the general meeting 10. Any other business Under point 1. in the agenda information on climate change and the low-carbon transition plan is given as part of the overall report on the company's activities. |

### C3.2

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**
Yes, qualitative and quantitative

### C3.2a

**(C3.2a) Provide details of your organization's use of climate-related scenario analysis.**

| Climate-related scenarios and models applied | Details |
|---|---|
| IEA Sustainable development scenario Other, please specify (IEA Stated Policies Scenario (STEPS), IEA Net Zero Emissions by 2050 (NZE2050)) | 1) Selection Working with climate-related scenario analysis is a natural part of learning and understanding the market for wind turbines. This has given Vestas a good starting point for climate-related scenario analysis where we use the International Energy Agency's (IEA) scenarios and look for the 2030 and 2050 time-horizon. To evaluate our Physical risks - acute as well and chronic - we wanted a likely scenario that could prepare us for the future as a status quo scenario and selected the Stated Policies Scenario as it explores possible outcome of current policies and announced policies (if backed up with detailed measures for their realisation). To evaluate our Transition risks - Policy and Legal risks, Technology risks, Market risks and Reputation risks - we wanted a scenario that could indicate the needed change for reaching a 1.5°C scenario in 2100. We looked for a radical scenario and ended selecting two scenarios as the emission levels in 2030 are very different in the two scenarios giving a clear 2030 view of the gap to close to get to Net Zero Emissions by 2050. The scenarios selected are the Sustainable Development Scenario (SDS) and the Net Zero Emission by 2050 (NZE2050). They are both backward engineered scenarios investigating how meeting energy-related Sustainable Development Goals including the Paris agreement (well below 2°C) or the net-zero emissions by 2050 could be done. When compared to STEPS mentioned above it well illustrates the huge gap of current policy ambitions with what is needed to contain global warming. Understating the gap is fundamental for identification of transition risks and by including the boldest IEA scenario (NZE2050), requiring immediate increase of policy action, clean energy investments (incl. infrastructure) and behavioural changes we find that the risk identification is sparked in the right way. 2) Time horizon For the evaluation we see 2030 and 2050 as the time horizons as this decade will be of high importance towards the impacts seen from climate change and mankind's ability to change its future. 2050 is the year linked to the EU zones Net Zero goal and a time horizon that fits well with most assets expected lifetime. 3) Organizational areas Strategic functions and procurement are some of the areas involved in the risk assessment. Cost implications from potential increased carbon prices (transactional risk) or more extreme weather (physical risk) have been our starting point when evaluating the risks that potentially impact assesses under service, own operations or supply chain. 4) Results We have seen unique Vestas related risks both physicals and transactional. The impact on our specific supply change has been calculated to a risk of between 50M EUR to 125M EUR and Vestas have already seen high intensity lightning and extreme cold operation conditions for our wind turbines in the past. In our STEPS scenario we see a need for increased R&D expenditures for e.g. stronger lightning protection. 5) Strategy impact The results identified are been integrated into the Enterprise Risk Management system as a natural part of identifying risks, risk owners and owners of mitigation actions. In this way our scenario based work manly impacts by initiation of mitigation actions. 6) Case study on impact on strategy The scenario work and its integration to the overall Enterprise Risk Management system as part of the TCFD implementation has been a great journey and learning of how to use the climate scenarios in the best way to spark risk identification followed by listing of mitigation actions to inform the strategic development and transparent decision making. We are planning to invite the risk committee for a sessions on climate related risks as we continue to see the importance of top management anchoring and engagement. Furthermore a solid climate strategy as part of the overall sustainability strategy has been developed with supply chain engagement as the biggest potential. |

### C3.3

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

| | Have climate-related risks and opportunities influenced your strategy in this area? | Description of influence |
|---|---|---|
| Products and services | Yes | As part of our effort to lead the global energy transition, Vestas aims to bring sustainable energy into the mainstream. To this end Vestas is engaging more directly with electrification, which is key to driving decarbonisation, increasing wind's penetration of the energy system. To create a sustainable energy system, electrification of transport, heating, cooling, and industrial processes is pivotal, and Vestas will work to increase the attention around this aspect of the energy transition. Wind and solar energy only account for around 9 percent of the global electricity generation mix today; it is therefore clear that the deployment of renewables needs to accelerate substantially for the world to stay within a 1.5 °C scenario. Furthermore, risks related to higher intensity of extreme weather e.g. high intensity lightning and extreme cold operation conditions is also impacting the strategy and way to market for product and service. The constant research and development (R&D) of our products take into consideration these risks finding new innovative ways to mitigate. This is opportunities and risks that are impacting the short-term strategy and it is monitored to better understand the long-term implications. Case study: The Electrification of mobility is important for climate change mitigation and holds a great potential for our wind turbine products and service business. This move towards more Electrical vehicles (EV's) needs increased public awareness and a lot of development. One of our actions on this has been to sign up as Principal Partner to the Mercedes-Benz EQ Formula E Team, where we have committed to a host of partnership initiatives, both on and off the track, to advance the electrification agenda. Our aim is to play a key role in driving the team's sustainability programme through our own partnership and sponsorship activities. One of the results is a developed a unique Battery Energy Storage System (BESS) which will support the team's efforts, demonstrating that critical climate change mitigation technologies are, in fact, already available. |
| Supply chain and/or value chain | Yes | With the Paris Agreement as the binding international treaty on climate change with the goal to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. The Paris Agreement creates the foundation for a dramatic change of society that is expecting to pick up speed in this decade. To find the economically most viable way to the goal of the Paris Agreement more regions and counties have introduced carbon taxation (e.g. the EU ETS) and it is evaluated highly likely that more industries and countries will be impacted and higher prices on carbon emissions will be seen. With a unique supply chain carbon footprint of approximately 10Mt CO2 in 2020 and a current carbon price not reflecting the real cost of change needed to transition into a 1.5 degree scenario, the potential impact of increased carbon prices either market or politically motivated can have significant impact on price structure. As products are sold with delivery times of years and in a very competitive market it is only expected that a small part of the risk can be mitigated through higher prices towards customers. A solid climate strategy as part of the overall sustainability strategy has therefore been developed. The focus is to become carbon neutral in 2030 in own operation without the use of carbon offsets and to reduce emission in the supply chain by 45% per MWh generated by 2030. The supply chain engagement has the biggest potential and the use of AI and reporting tools are part of the mitigation investment. (more info found in section C2.3a risk 1.) This supply chain climate related risk is handled as a long-term strategic risk. Case study Supply change engagement is of high importance for mitigating this climate-related risk and the task at hand is to set climate related reduction targets that will motivate Vestas as well as suppliers to contribute. Besides Vestas' carbon neutrality target by 2030, an ambitious target for scope 3 emissions has been approved and fully supported by the Science Based Target initiative, further proving its significance. As a result, we today have 27 strategic suppliers committed to our supply chain engagement program and expect more suppliers to be enrolled in the future. |
| Investment in R&D | Yes | Vestas has already seen high intensity lightning and extreme cold operation conditions for our wind turbines in the past. Risks related to higher intensity of extreme weather e.g. high intensity lightning and extreme cold operation conditions impact the strategy and R&D periodization. R&D of our products take into consideration these risks finding new innovative ways to mitigate. This risk is seen manly impacting long term and is therefore handled as a long-term risk. Case study The likelihood of more extreme weather is a growing concern and events of high intensity lightning and extreme cold operation conditions have already been seen. The task is to continue Vestas frontier R&D work on wind energy that goes back 40 years, introducing market-leading wind energy solutions that have driven down the cost of energy and taken wind energy from niche to mainstream. One of our actions has been the January 2019 introduction of the Vestas EnVentus™ wind turbine platform, which represents another significant step forward in the continuous efforts to lower the levelised cost of energy and accelerate the global transition to a more sustainable energy mix. This new platform offers all the latest features to secure a long and robust product life. On February 10th, 2021 Vestas introduced the V236-15.0 MW turbine. The new technology establishes a strong foundation for Vestas' offshore leadership journey by elevating the industry benchmark for performance and continued cost reduction in offshore technology, making Vestas highly competitive in offshore tenders already in 2021. Also this new platform offers all the latest features to secure a long and robust product life. |
| Operations | Yes | With the Paris Agreement as the binding international treaty on climate change with the goal to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century. The Paris Agreement creates the fundament for a dramatic change of society that is expecting to pick up speed in this decade. To find the economically most viable way to the goal of the Paris Agreement, more regions and counties have introduced carbon taxation (e.g. the EU ETS) and it is evaluated highly likely that more industries and countries will be impacted and higher prices on carbon emissions will be seen. With an operations carbon footprint of approximately 100.000t CO2 in 2019 and a current carbon price not reflecting the real cost of change needed to transition into a 1.5 degree scenario the potential impact of increased carbon prices either market or politically motivated can have impact on price structure. This operational climate related risk is handled as a long-term risk. Case study With a set carbon neutral target by 2030 for our own operations it is clear that Vestas operations need to be transformed. Actions on identification of big scope 1 and 2 opportunities have been mapped e.g. transition to renewable electricity, energy savings and electrification of production. In 2020 we achieved a 100% renewable electricity for own operations. |

## C3.4

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

| | Financial planning elements that have been influenced | Description of influence |
|---|---|---|
| Row 1 | Revenues<br>Direct costs<br>Capital expenditures | Dealing with climate change is an integral part of Vestas business model and strategy and it impacts on all major financial parameters e.g. Revenues, direct costs and capital expenditures on a yearly bases and is part of our yearly budgeting and planning process covering the coming year. With the 2020 launch of our sustainability strategy, Sustainability in Everything We Do, we are now on track to become a fully sustainable company while we continue to create and service products that are critical for climate change mitigation. We are working to improve our own environmental performance, create value for local communities, promote a safe, diverse and inclusive workplace, and lead the transition to a world powered by sustainable energy. To succeed in these ambitions, we are ramping up our efforts to integrate sustainability not only across our business, but throughout our operations and value chain. We see an increased interest and benefit of sustainability linked loan agreements that based on our Science Based Targets Initiative approved climate change mitigation targets is benefiting and influencing our financial planning. As part of our financial planning we on April 29th, 2021 signed a EUR 2,000 million revolving multi-currency credit facility with a group of leading banks. The facility's margin will be closely linked to Vestas' sustainability KPIs and will support Vestas' ambitions to accelerate the deployment of renewable energy and drive technological innovation. |

## C3.4a

**(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).**

No further comments.

## C4. Targets and performance

## C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**
Both absolute and intensity targets

## C4.1a

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**
Abs 1

**Year target was set**
2020

**Target coverage**
Company-wide

**Scope(s) (or Scope 3 category)**
Scope 1+2 (market-based)

**Base year**
2019

**Covered emissions in base year (metric tons CO2e)**
109000

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**
100

**Target year**
2030

**Targeted reduction from base year (%)**
100

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**
0

**Covered emissions in reporting year (metric tons CO2e)**
73000

**% of target achieved [auto-calculated]**
33.0275229357798

**Target status in reporting year**
New

**Is this a science-based target?**
Yes, and this target has been approved by the Science-Based Targets initiative

**Target ambition**
1.5°C aligned

**Please explain (including target coverage)**

## C4.1b

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**
Int 1

**Year target was set**
2020

**Target coverage**
Company-wide

**Scope(s) (or Scope 3 category)**
Scope 3 (upstream & downstream)

**Intensity metric**
Other, please specify (kg CO2e per MWh generated)

**Base year**
2019

**Intensity figure in base year (metric tons CO2e per unit of activity)**
6.45

**% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure**
70

**Target year**
2030

**Targeted reduction from base year (%)**
0

**Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]**
6.45

**% change anticipated in absolute Scope 1+2 emissions**
0

**% change anticipated in absolute Scope 3 emissions**
0

**Intensity figure in reporting year (metric tons CO2e per unit of activity)**
6.49

**% of target achieved [auto-calculated]**
<Not Applicable>

**Target status in reporting year**
New

**Is this a science-based target?**
Yes, and this target has been approved by the Science Based Targets initiative

**Target ambition**
2°C aligned

**Please explain (including target coverage)**
The target covers 70% of the scope 3 emissions

## C4.2

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

## C4.2a

**(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.**

**Target reference number**
Low 1

**Year target was set**
2019

**Target coverage**
Company-wide

**Target type: absolute or intensity**
Absolute

**Target type: energy carrier**
Electricity

**Target type: activity**
Consumption

**Target type: energy source**
Renewable energy source(s) only

**Metric (target numerator if reporting an intensity target)**
Percentage

**Target denominator (intensity targets only)**
<Not Applicable>

**Base year**
2018

**Figure or percentage in base year**
68

**Target year**
2020

**Figure or percentage in target year**
100

**Figure or percentage in reporting year**
100

**% of target achieved [auto-calculated]**
100

**Target status in reporting year**
Achieved

**Is this target part of an emissions target?**
It will contribute to an emissions target

**Is this target part of an overarching initiative?**
RE100

**Please explain (including target coverage)**
As a member of RE100, Vestas remains committed to sourcing 100 percent of its electricity from renewable sources. Since 2013, this has been achieved partly by purchasing renewable electricity and certificates for renewable energy, and partly by compensating for the consumption of non-renewable electricity with Vestas-owned wind power plants. In 2019. Vestas has decided no longer to use compensation for non-renewable electricity. In 2019, Vestas' share of renewable electricity increased from 68 percent to 82 percent, enabled by purchase of more renewable electricity.

## C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

**Target reference number**
NZ1

**Target coverage**
Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**
Abs1
Int1

**Target year for achieving net zero**
2050

**Is this a science-based target?**
No, but we are reporting another target that is science-based

**Please explain (including target coverage)**
Vestas has signed up for the Business Ambition for 1.5°C Commitment

## C4.3

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

## C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

| | Number of initiatives | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---|---|---|
| Under investigation | 17 | |
| To be implemented* | 5 | 3300 |
| Implementation commenced* | 3 | 50 |
| Implemented* | 21 | 2695 |
| Not to be implemented | 1 | |

## C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

| | |
|---|---|
| Energy efficiency in buildings | Heating, Ventilation and Air Conditioning (HVAC) |

**Estimated annual CO2e savings (metric tonnes CO2e)**
222

**Scope(s)**
Scope 1

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
73000

**Investment required (unit currency – as specified in C0.4)**
13400

**Payback period**
<1 year

**Estimated lifetime of the initiative**
11-15 years

**Comment**

**Initiative category & Initiative type**

| | |
|---|---|
| Energy efficiency in buildings | Heating, Ventilation and Air Conditioning (HVAC) |

**Estimated annual CO2e savings (metric tonnes CO2e)**
1674

**Scope(s)**
Scope 2 (location-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
540000

**Investment required (unit currency – as specified in C0.4)**
294000

**Payback period**
<1 year

**Estimated lifetime of the initiative**
11-15 years

**Comment**

**Initiative category & Initiative type**

| | |
|---|---|
| Energy efficiency in buildings | Lighting |

**Estimated annual CO2e savings (metric tonnes CO2e)**
663

**Scope(s)**
Scope 2 (location-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
108000

**Investment required (unit currency – as specified in C0.4)**
68000

**Payback period**
<1 year

**Estimated lifetime of the initiative**
3-5 years

**Comment**

**Initiative category & Initiative type**

| | |
|---|---|
| Energy efficiency in production processes | Process optimization |

**Estimated annual CO2e savings (metric tonnes CO2e)**
134

**Scope(s)**
Scope 2 (location-based)

**Voluntary/Mandatory**
Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**
17950

**Investment required (unit currency – as specified in C0.4)**
1600

**Payback period**
<1 year

**Estimated lifetime of the initiative**
3-5 years

**Comment**

## C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

| Method | Comment |
|---|---|
| Dedicated budget for low-carbon product R&D | Research and development costs recognised in the income statement amounted to EUR 265m in 2020. R&D costs are wholly dedicated to renewable energy solutions. |
| Dedicated budget for energy efficiency | As part of the building policy specific specifications are in place for energy investments. |
| Financial optimization calculations | Fuel savings for transport through planning of routes and tracking driving behaviour |
| Dedicated budget for other emissions reduction activities | Covering extra cost for electric vehicles |

## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**
Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

**Level of aggregation**
Company-wide

**Description of product/Group of products**
Manufacturing and installation of wind turbines

**Are these low-carbon product(s) or do they enable avoided emissions?**
Low-carbon product

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**
Low-Carbon Investment (LCI) Registry Taxonomy

**% revenue from low carbon product(s) in the reporting year**
85

**% of total portfolio value**
<Not Applicable>

**Asset classes/ product types**
<Not Applicable>

**Comment**
CO2 savings from the produced and shipped MW are calculated on the basis of a capacity factor of 30 percent of the MW produced and shipped, an expected lifetime of 20 years of the MW produced and shipped, and the standard factor from the IEA of average CO2 emission for electricity in the world. The CO2 savings over the lifetime on the MW produced and shipped in 2019 is 322 million tonnes of CO2.

---

**Level of aggregation**
Company-wide

**Description of product/Group of products**
As the industry's preferred O&M partner, Vestas offers flexible maintenance offerings - from low-scope services to wall-to-wall programs with advanced guarantees. For Vestas and multibrand turbines alike, we offer an extensive range of parts and repair services, including uptower repairs of major components, advanced inspection programs, and the world's largest wind turbine spare parts shopping platform, Shop Vestas. Upgrading existing turbines with the latest advancements within wind technology can boost the business case of a wind farm. Vestas PowerPlus™ is our collection of performance upgrades, while TurbinePlus™ and LifePlus™ represent our optimisation and life extension solutions.

**Are these low-carbon product(s) or do they enable avoided emissions?**
Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**
Low-Carbon Investment (LCI) Registry Taxonomy

**% revenue from low carbon product(s) in the reporting year**
15

**% of total portfolio value**
<Not Applicable>

**Asset classes/ product types**
<Not Applicable>

**Comment**
Servicing of wind turbines

---

## C5. Emissions methodology

## C5.1

**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

**Scope 1**

**Base year start**
January 1 2019

**Base year end**
December 31 2019

**Base year emissions (metric tons CO2e)**
70927

**Comment**

**Scope 2 (location-based)**

**Base year start**
January 1 2019

**Base year end**
December 31 2019

**Base year emissions (metric tons CO2e)**
117864

**Comment**

**Scope 2 (market-based)**

**Base year start**
January 1 2019

**Base year end**
December 31 2019

**Base year emissions (metric tons CO2e)**
38100

**Comment**

## C5.2

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance

# C6. Emissions data

## C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**
70968

**Start date**
<Not Applicable>

**End date**
<Not Applicable>

**Comment**

## C6.2

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**
We are reporting a Scope 2, location-based figure

**Scope 2, market-based**
We are reporting a Scope 2, market-based figure

**Comment**

## C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**
104495

**Scope 2, market-based (if applicable)**
2159

**Start date**
<Not Applicable>

**End date**
<Not Applicable>

**Comment**

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**
No

## C6.5

**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
9003000

**Emissions calculation methodology**
CO2 from materials going into products are calculated based on LCAs following ISO 14040 & 14044, reported publicly available at vestas.com. Other purchased goods and services are estimated based on spend using DEFRA factors for Indirect emissions from the supply chain

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
52

**Please explain**
CO2 emission data is derived from LCA software, Worldsteel and specific larger suppliers. % number is based on CO2 share of Turbine and Balance of Plant with all metals based on Supply chain partner data. See also "End of life treatment of sold products" for further explanation

**Capital goods**

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
70700

**Emissions calculation methodology**
Estimated based on spend using DEFRA factors for Indirect emissions from the supply chain

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
0

**Please explain**

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
17500

**Emissions calculation methodology**
Calculated based on fuel consumption and DEFRA 2020 WTT-fuels gross CV, Emission factor DEFRA (T&D 2016 + WTT generation 2020 + WTT T&D 2020) and emission factors for renewable electricity

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
0

**Please explain**
Energy consumption data received from suppliers

### Upstream transportation and distribution

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
600000

**Emissions calculation methodology**
We have received specific data for various transport legs for the turbine transport, these have been used to model all transport and calculated based on LCAs following ISO 14040 & 14044, reported publicly available at vestas.com. We found CO2 emissions were very different from standard LCI data, due to a turbine components requiring highly specialised transportation equipment.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
50

**Please explain**
We have received specific data for various transport legs for the turbine transport, these have been used to model all transport calculated based on LCAs following ISO 14040 & 14044, reported publicly available at vestas.com. We found CO2 emissions were very different from standard LCI data, due to a turbine components requiring highly specialised transportation equipment.

### Waste generated in operations

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
15000

**Emissions calculation methodology**
Estimated using DEFRA factors for Indirect emissions from the supply chain

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
0

**Please explain**

### Business travel

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
6000

**Emissions calculation methodology**
Data from Travel agent using GHG Protocol emission factors

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
100

**Please explain**
Business flights. Data from Travel agent.

### Employee commuting

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
59500

**Emissions calculation methodology**
Estimated using UK Government GHG Conversion Factors for Company Reporting 2020 and estimated transport commuting distance

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
0

**Please explain**

### Upstream leased assets

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Facilities/equipment rented /leased from a third party are included in scope 1&2

### Downstream transportation and distribution

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Vestas pays for all the transport in its value chain, thus all transport is included in category 4 Upstream transportation and distribution

### Processing of sold products

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Vestas products need no further processing

### Use of sold products

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Vestas products do not emit GHG during their use

### End of life treatment of sold products

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
3000

**Emissions calculation methodology**
CO2 emissions are estimated by assuming a MW quantity of wind turbines decommissioned in 2020. CO2 emission factor from GaBi software are used assuming worse case for incineration of plastics and oils; landfill of all other non-metal materials; and no recycling credits for metal recycling.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
0

**Please explain**

### Downstream leased assets

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Vestas does not rent/lease any owned facilities/equipment to a third party

**Franchises**

**Evaluation status**
Not relevant, explanation provided

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**
Vestas does not have any franchises

**Investments**

**Evaluation status**
Relevant, calculated

**Metric tonnes CO2e**
19300

**Emissions calculation methodology**
Data received from joint venture

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
100

**Please explain**
Mitsubishi Vestas Offshore Wind joint venture 50% owned

**Other (upstream)**

**Evaluation status**

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**

**Other (downstream)**

**Evaluation status**

**Metric tonnes CO2e**
<Not Applicable>

**Emissions calculation methodology**
<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**
<Not Applicable>

**Please explain**

## C-CG6.6

**(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?**

| | Assessment of life cycle emissions | Comment |
|---|---|---|
| Row 1 | Yes | Life Cycle Assessments available at https://www.vestas.com/en/about/sustainability#!available-reports |

## C-CG6.6a

**(C-CG6.6a) Provide details of how your organization assesses the life cycle emissions of its products or services.**

| | Products/services assessed | Life cycle stage(s) most commonly covered | Methodologies/standards/tools applied | Comment |
|---|---|---|---|---|
| Row 1 | All existing and new products/services | Cradle-to-grave | ISO 14040 & 14044 | Life Cycle Assessments available at https://www.vestas.com/en/about/sustainability#!available-reports |

## C6.7

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**
Yes

## C6.7a

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

| | CO2 emissions from biogenic carbon (metric tons CO2) | Comment |
|---|---|---|
| Row 1 | 8900 | |

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**
0.0000049

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**
73127

**Metric denominator**
unit total revenue

**Metric denominator: Unit total**
14819000000

**Scope 2 figure used**
Market-based

**% change from previous year**
45

**Direction of change**
Decreased

**Reason for change**
0.00000404/0.00000898*100 In 2020, Vestas' share of renewable electricity increased from 82 percent to 100 percent, enabled by purchase of more renewable electricity. I-RECs were bought in China, India, Philippines, Turkey, Brasil and Mexico.

# C7. Emissions breakdowns

## C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**
No

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

| Country/Region | Scope 1 emissions (metric tons CO2e) |
|---|---|
| Denmark | 3173 |
| Australia | 1546 |
| Austria | 329 |
| Brazil | 858 |
| Bulgaria | 121 |
| Canada | 1370 |
| Chile | 177 |
| China | 4643 |
| Finland | 248 |
| France | 1996 |
| Germany | 6418 |
| Greece | 634 |
| India | 801 |
| Ireland | 297 |
| Italy | 1711 |
| Japan | 74 |
| Kenya | 136 |
| Republic of Korea | 24 |
| Mexico | 758 |
| Netherlands | 449 |
| New Zealand | 81 |
| Philippines | 37 |
| Poland | 1463 |
| Portugal | 512 |
| Romania | 624 |
| South Africa | 702 |
| Spain | 3778 |
| Sweden | 1268 |
| Taiwan, Greater China | 53 |
| Turkey | 399 |
| United States of America | 33258 |
| United Kingdom of Great Britain and Northern Ireland | 1257 |
| Ukraine | 163 |
| Jordan | 369 |
| Norway | 226 |
| Peru | 69 |
| Uruguay | 253 |
| Morocco | 81 |
| Senegal | 160 |
| Argentina | 245 |
| Russian Federation | 0 |
| Mongolia | 25 |
| Thailand | 96 |
| Viet Nam | 86 |

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division
By facility

## C7.3a

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

| Business division | Scope 1 emissions (metric ton CO2e) |
|---|---|
| AME | 17048 |
| ASP | 2714 |
| AGT | 11869 |
| Blades | 12238 |
| CHI | 327 |
| CON | 915 |
| Group | 1010 |
| MED | 10273 |
| NCE | 13597 |
| Service | 412 |
| VPS | 565 |

## C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

| Facility | Scope 1 emissions (metric tons CO2e) | Latitude | Longitude |
|---|---|---|---|
| AME USA | 15677 | 45.508704 | -122.560581 |
| ASP Taiwan | 53 | 25.085755 | 121.561474 |
| ASP Australia | 1546 | -37.828819 | 144.971207 |
| ASP India | 693 | 13.05939 | 80.24567 |
| ASP Japan | 74 | 35.620504 | 139.739731 |
| ASP South Korea | 24 | 37.557121 | 126.977375 |
| ASP New Zealand | 81 | -40.357419 | 175.611475 |
| Blades Brighton | 3526 | 39.977154 | -104.746774 |
| Blades Daimiel | 990 | 39.069505 | -3.617359 |
| Blades Lauchhammer | 187 | 51.474023 | 13.778967 |
| Blades Lem | 139 | 56.022361 | 8.387852 |
| Blades Taranto | 696 | 40.456833 | 17.258516 |
| Blades Tianjin | 2996 | 39.252134 | 117.161098 |
| Blades Windsor | 3705 | 40.461449 | -104.848091 |
| NCE Austria | 329 | 48.213241 | 16.417216 |
| NCE Germany | 5984 | 53.597689 | 9.976442 |
| NCE Netherlands | 449 | 51.953244 | 5.873535 |
| CHI China | 327 | 39.920885 | 116.333599 |
| Controls Hammel | 488 | 56.241447 | 9.866301 |
| Controls Tianjin | 427 | 39.252134 | 117.161098 |
| Group Staff Denmark | 911 | 56.196363 | 10.177488 |
| MED Brazil | 858 | -14.242916 | -51.412289 |
| MED France | 1996 | 48.175431 | -2.754229 |
| MED Greece | 634 | 38.032835 | 23.81424 |
| MED Italy | 1015 | 40.45976 | 17.38497 |
| MED Mexico | 758 | 19.422447 | -99.209758 |
| MED Portugal | 484 | 40.04634 | -7.950804 |
| MED Spain | 2774 | 40.505078 | -3.639038 |
| MED Turkey | 399 | 41.019341 | 28.95294 |
| Assembly Tianjin | 726 | 39.252134 | 117.161098 |
| Assembly Brighton | 1237 | 39.977154 | -104.746774 |
| Assembly Chennai | 27 | 13.06397 | 80.24311 |
| Generators Tianjin | 167 | 39.252134 | 117.161098 |
| Repair Generator Lübeck | 204 | 53.888326 | 10.705765 |
| Assembly Ringkøbing | 469 | 56.089233 | 8.2718 |
| Generators Viveiro | 15 | 43.580862 | -7.558549 |
| NCE Denmark | 774 | 56.091894 | 8.642899 |
| NCE Ireland | 297 | 53.35842 | -6.241424 |
| NCE Poland | 1463 | 53.429035 | 14.556745 |
| NCE Sweden | 1268 | 55.548932 | 12.988119 |
| NCE United Kingdom | 813 | 53.424599 | -2.52208 |
| Warehouse NEU Randers | 209 | 56.425408 | 10.045728 |
| VPS United Kingdom | 443 | 50.7001 | -1.295939 |
| VPS Denmark | 84 | 56.196363 | 10.177488 |
| Towers Pueblo | 9114 | 38.215137 | -104.640947 |
| Generators Travemünde | 43 | 53.934893 | 10.845711 |
| Manufacturing HQ | 99 | 56.196363 | 10.177488 |
| AME Canada | 1370 | 45.508704 | -122.560581 |
| ASP Philippines | 37 | 14.560725 | 121.016469 |

| Facility | Scope 1 emissions (metric tons CO2e) | Latitude | Longitude |
|---|---|---|---|
| NCE Bulgaria | 121 | 43.219576 | 27.915707 |
| NCE Romania | 624 | 44.429997 | 26.12921 |
| NCE Ukraine | 163 | 43.219576 | 27.915707 |
| VPS India | 10 | 12.86138 | 80.226668 |
| Blades Ahmedabad | 71 | 22.841912 | 72.370252 |
| NCE Kenya | 136 | 3.487274 | 35.354224 |
| NCE South Africa | 702 | -28.786638 | 24.753048 |
| MED Chile | 177 | -30.20736 | -71.639169 |
| NCE Finland | 248 | 64.198342 | 26.28978 |
| MED Jordan | 369 | 31.260381 | 34.878476 |
| MED Peru | 69 | -9.468801 | -77.265701 |
| MED Uruguay | 253 | 32.5228 | 55.7658 |
| NCE Norway | 226 | 59.90596 | 10.71431 |
| VPS Portugal | 28 | 40.04634 | -7.950804 |
| MED Senegal | 160 | 14.4974 | 14.4524 |
| MED Morocco | 81 | 31.7917 | 7.0926 |
| MED Argentina | 245 | 38.4161 | 63.6167 |
| Blades Ulyanovsk | 0 | 54.3187 | 48.3978 |
| Assembly Fortaleza | 0 | 3.7327 | 38.527 |
| ASP Mongolia | 25 | 43.5708 | 89.962 |
| ASP Thailand | 96 | 5.7743 | 97.968 |
| ASP Vietnam | 86 | 14.0583 | 108.277 |
| Assembly Leon | 0 | 42.5991 | 5.5673 |
| Philippines | 0 | 6.7525 | 124.801 |

## C7.5

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

| Country/Region | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) | Purchased and consumed electricity, heat, steam or cooling (MWh) | Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh) |
|---|---|---|---|---|
| Australia | 148 | 0 | 208 | 208 |
| Austria | 9 | 6 | 56 | 22 |
| Brazil | 79 | 0 | 796 | 796 |
| Bulgaria | 16 | 0 | 36 | 36 |
| Chile | 15 | 15 | 38 | 0 |
| China | 23571 | 0 | 38265 | 38265 |
| Denmark | 6176 | 726 | 52678 | 48468 |
| Germany | 11606 | 900 | 41006 | 35794 |
| Greece | 95 | 0 | 174 | 174 |
| India | 10256 | 0 | 13640 | 13640 |
| Italy | 12801 | 0 | 41561 | 41561 |
| Japan | 29 | 29 | 57 | 0 |
| Mexico | 58 | 0 | 128 | 128 |
| Netherlands | 54 | 0 | 128 | 128 |
| Poland | 60 | 0 | 140 | 140 |
| Portugal | 140 | 0 | 470 | 470 |
| Romania | 44 | 0 | 131 | 131 |
| South Africa | 0 | 0 | 0 | 0 |
| Spain | 6845 | 0 | 26379 | 26379 |
| Sweden | 5 | 0 | 563 | 563 |
| Taiwan, Greater China | 18 | 18 | 32 | 0 |
| Turkey | 60 | 0 | 129 | 129 |
| United Kingdom of Great Britain and Northern Ireland | 987 | 0 | 4303 | 4303 |
| United States of America | 29888 | 0 | 70950 | 70950 |
| Uruguay | 0.3 | 0.3 | 13 | 0 |
| France | 13 | 0 | 239 | 239 |
| Morocco | 0 | 0 | 0 | 0 |
| Senegal | 0 | 0 | 0 | 0 |
| Argentina | 31 | 31 | 97 | 0 |
| Canada | 0 | 0 | 0 | 0 |
| Finland | 0 | 0 | 0 | 0 |
| Jordan | 0 | 0 | 0 | 0 |
| Kenya | 0 | 0 | 0 | 0 |
| Republic of Korea | 0 | 0 | 0 | 0 |
| New Zealand | 0 | 0 | 0 | 0 |
| Norway | 0 | 0 | 0 | 0 |
| Peru | 0 | 0 | 0 | 0 |
| Philippines | 177 | 0 | 252 | 252 |
| Russian Federation | 1913 | 433 | 6658 | 4147 |
| Ukraine | 0 | 0 | 0 | 0 |
| United States of America | | | | |

## C7.6

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By business division

By facility

## C7.6a

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

| Business division | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|---|---|---|
| AME | 611 | 0 |
| ASP | 1041 | 47 |
| AGT | 19758 | 131 |
| Blades | 69779 | 1669 |
| NCE | 920 | 212 |
| CON | 3162 | 41 |
| MED | 499 | 47 |
| Service | 808 | 0 |
| VPS | 5138 | 0 |
| CHI | 426 | 0 |
| Group | 287 | 12 |

## C7.6b

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

| Facility | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|---|---|---|
| AME USA | 611 | 0 |
| ASP Taiwan | 18 | 18 |
| ASP India | 847 | 0 |
| ASP Japan | 29 | 29 |
| Blades Lauchhammer | 9643 | 848 |
| Blades Lem | 2389 | 387 |
| Blades Tianjin | 15971 | |
| NCE Austria | 9 | 6 |
| NCE Germany | 297 | 52 |
| NCE Netherlands | 54 | 0 |
| CHI China | 426 | 0 |
| Controls Tianjin | 2429 | 0 |
| MED Greece | 95 | 0 |
| MED Italy | 60 | 0 |
| MED Mexico | 58 | 0 |
| MED Spain | 143 | 0 |
| MED Turkey | 60 | 0 |
| Assembly Tianjin | 1775 | 0 |
| Assembly Chennai | 692 | 0 |
| Generators Tianjin | 2970 | 0 |
| Assembly Ringkøbing | 439 | 131 |
| Towers Pueblo | 10865 | 0 |
| Assembly Fortaleza | 79 | 0 |
| ASP Philippines | 0 | 0 |
| NCE Bulgaria | 16 | 0 |
| NCE Romania | 44 | 0 |
| VPS India | 2321 | 0 |
| Blades Ahmedabad | 6396 | 0 |
| NCE South Africa | 0 | 0 |
| MED Chile | 15 | 15 |
| MED France | 13 | 0 |
| AME Canada | 0 | 0 |
| Group Staff Denmark | 123 | 12 |
| APC Australia | 148 | 0 |
| APC New Zealand | 0 | 0 |
| APC South Korea | 0 | 0 |
| Assembly Brighton | 1732 | 0 |
| Blades Brighton | 6939 | 0 |
| Blades Daimiel | 6315 | 0 |
| Blades Taranto | 12741 | 0 |
| Blades Ulyanovsk | 1913 | 433 |
| Blades Windsor | 9140 | 0 |
| CEU Kenya | 0 | 0 |
| CEU Ukraine | 0 | 0 |
| Controls Hammel | 774 | 41 |
| Generators Travemünde | 948 | 0 |
| Generators Viveiro | 387 | 0 |
| Manufacturing HQ | 0 | 0 |
| MED Argentina | 31 | 31 |

| Facility | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|---|---|---|
| MED Brazil | 0 | 0 |
| MED Jordan | 0 | 0 |
| MED Morocco | 0 | 0 |
| MED Peru | 0 | 0 |
| MED Portugal | 24 | 0 |
| MED Senegal | 0 | 0 |
| MED Uruguay | 0.3 | 0.3 |
| NEU Denmark | 510 | 155 |
| NEU Finland | 0 | 0 |
| NEU Ireland | 0 | 0 |
| NEU Norway | 0 | 0 |
| NEU Poland | 60 | 0 |
| NEU Sweden | 5 | 0 |
| NEU United Kingdom | 137 | 0 |
| VPS Denmark | 1851 | 0 |
| VPS Portugal | 116 | 0 |
| VPS United Kingdom | 850 | 0 |
| Warehouse NEU Randers | 90 | 0 |
| Philippines | 177 | 0 |

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

## C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

| | Change in emissions (metric tons CO2e) | Direction of change | Emissions value (percentage) | Please explain calculation |
|---|---|---|---|---|
| Change in renewable energy consumption | 34882 | Decreased | 32 | 34882/108760*100 Reduction from changing to renewable electricity in 2020 divided by scope 1&2 in 2019 |
| Other emissions reduction activities | 813 | Decreased | 1 | 813/108760*100 Reduction from changing from natural gas heating to partly renewable district heating in 2020 divided by scope 1&2 in 2019 |
| Divestment | | <Not Applicable> | | |
| Acquisitions | | <Not Applicable> | | |
| Mergers | | <Not Applicable> | | |
| Change in output | 62 | Increased | 0.06 | 62/108760*100 |
| Change in methodology | | <Not Applicable> | | |
| Change in boundary | | <Not Applicable> | | |
| Change in physical operating conditions | | <Not Applicable> | | |
| Unidentified | | <Not Applicable> | | |
| Other | | <Not Applicable> | | |

## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

## C-CG7.10

**(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?**

Increased

## C-CG7.10a

**(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.**

**Purchased goods and services**

**Direction of change**
Increased

**Primary reason for change**
Change in output

**Change in emissions in this category (metric tons CO2e)**
2777000

**% change in emissions in this category**
45

**Please explain**
2,777,000/6,226,000*100 In 2020, MW produced and shipped turbines increased 35% and turbines got heavier per MW. At the same time capacity factor and lifetime have increased keeping the overall carbon intensity stable.

**Capital goods**

**Direction of change**
Decreased

**Primary reason for change**
Other, please specify (Lower investment in production equipment)

**Change in emissions in this category (metric tons CO2e)**
66300

**% change in emissions in this category**
48

**Please explain**
66,300/137000*100 Lower investment in production equipment

**Fuel and energy-related activities (not included in Scopes 1 or 2)**

**Direction of change**
Decreased

**Primary reason for change**
Change in renewable energy consumption

**Change in emissions in this category (metric tons CO2e)**
11000

**% change in emissions in this category**
39

**Please explain**
11,000/28,500*100 Increase to 100% renewable electricity

**Upstream transportation and distribution**

**Direction of change**
Increased

**Primary reason for change**
Change in output

**Change in emissions in this category (metric tons CO2e)**
179700

**% change in emissions in this category**
43

**Please explain**
179700/420400*100 In 2020, MW produced and shipped turbines increased 35% and turbines got heavier per MW. At the same time capacity factor and lifetime have increased keeping the overall carbon intensity stable.

**Waste generated in operations**

**Direction of change**
Increased

**Primary reason for change**
Change in output

**Change in emissions in this category (metric tons CO2e)**
3000

**% change in emissions in this category**
25

**Please explain**
3,000/12,000*100 In 2020, MW produced and shipped turbines increased 35%

**Business travel**

**Direction of change**
Decreased

**Primary reason for change**
Other, please specify (Reduced travelling due to COVID 19)

**Change in emissions in this category (metric tons CO2e)**
13300

**% change in emissions in this category**
69

**Please explain**
13,300/19,400*100 Reduced travelling due to COVID 19

**Employee commuting**

**Direction of change**
Increased

**Primary reason for change**
Change in methodology

**Change in emissions in this category (metric tons CO2e)**
20600

**% change in emissions in this category**
53

**Please explain**
20600/38900*100 Improved estimation method based on samples

**End-of-life treatment of sold products**

**Direction of change**
Decreased

**Primary reason for change**
Change in methodology

**Change in emissions in this category (metric tons CO2e)**
8500

**% change in emissions in this category**
73

**Please explain**
8,500/11,600*100 Correction in calculation

**Investments**

**Direction of change**
Increased

**Primary reason for change**
Change in boundary

**Change in emissions in this category (metric tons CO2e)**
12250

**% change in emissions in this category**
175

**Please explain**
12,250/7,000*100 Fuel for chartered vessels included scope 1&2 of joint venture

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**
More than 0% but less than or equal to 5%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

| | Indicate whether your organization undertook this energy-related activity in the reporting year |
|---|---|
| Consumption of fuel (excluding feedstocks) | Yes |
| Consumption of purchased or acquired electricity | Yes |
| Consumption of purchased or acquired heat | Yes |
| Consumption of purchased or acquired steam | No |
| Consumption of purchased or acquired cooling | No |
| Generation of electricity, heat, steam, or cooling | No |

## C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

| | Heating value | MWh from renewable sources | MWh from non-renewable sources | Total (renewable and non-renewable) MWh |
|---|---|---|---|---|
| Consumption of fuel (excluding feedstock) | LHV (lower heating value) | 7636 | 313938 | 321574 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 261229 | 237 | 261466 |
| Consumption of purchased or acquired heat | <Not Applicable> | 25696 | 11966 | 37662 |
| Consumption of purchased or acquired steam | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired cooling | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Total energy consumption | <Not Applicable> | 294561 | 326141 | 620702 |

## C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

| | Indicate whether your organization undertakes this fuel application |
|---|---|
| Consumption of fuel for the generation of electricity | Yes |
| Consumption of fuel for the generation of heat | Yes |
| Consumption of fuel for the generation of steam | No |
| Consumption of fuel for the generation of cooling | No |
| Consumption of fuel for co-generation or tri-generation | No |

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Fuels (excluding feedstocks)**
Diesel

**Heating value**
LHV (lower heating value)

**Total fuel MWh consumed by the organization**
152345

**MWh fuel consumed for self-generation of electricity**
14724

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**
<Not Applicable>

**Emission factor**
0.25278

**Unit**
kg CO2e per KWh

**Emissions factor source**
UK Department for Environment, Food & Rural Affairs (DEFRA) - 2020 version

**Comment**

**Fuels (excluding feedstocks)**

Petrol

**Heating value**
LHV (lower heating value)

**Total fuel MWh consumed by the organization**
53129

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
0

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**
<Not Applicable>

**Emission factor**
0.2412

**Unit**
kg CO2e per KWh

**Emissions factor source**
UK Department for Environment, Food & Rural Affairs (DEFRA) - 2020 version

**Comment**

---

**Fuels (excluding feedstocks)**
Liquefied Petroleum Gas (LPG)

**Heating value**
LHV (lower heating value)

**Total fuel MWh consumed by the organization**
2384

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
1614

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**
<Not Applicable>

**Emission factor**
0.21448

**Unit**
kg CO2e per KWh

**Emissions factor source**
UK Department for Environment, Food & Rural Affairs (DEFRA) - 2020 version

**Comment**

---

**Fuels (excluding feedstocks)**
Natural Gas

**Heating value**
LHV (lower heating value)

**Total fuel MWh consumed by the organization**
112860

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
112860

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**
0.18387

**Unit**
kg CO2e per KWh

**Emissions factor source**
UK Department for Environment, Food & Rural Affairs (DEFRA) - 2020 version

**Comment**

---

**Fuels (excluding feedstocks)**
Please select

**Heating value**
LHV (lower heating value)

**Total fuel MWh consumed by the organization**
855

**MWh fuel consumed for self-generation of electricity**
0

**MWh fuel consumed for self-generation of heat**
855

**MWh fuel consumed for self-generation of steam**
<Not Applicable>

**MWh fuel consumed for self-generation of cooling**
<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**
<Not Applicable>

**Emission factor**
0.26775

**Unit**
kg CO2e per KWh

**Emissions factor source**
UK Department for Environment, Food & Rural Affairs (DEFRA) - 2020 version

**Comment**

---

## C8.2e

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Denmark

**MWh consumed accounted for at a zero emission factor**
32151

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Hydropower

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Germany

**MWh consumed accounted for at a zero emission factor**
26671

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Italy

**MWh consumed accounted for at a zero emission factor**
41562

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
United Kingdom of Great Britain and Northern Ireland

**MWh consumed accounted for at a zero emission factor**
4303

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
United States of America

**MWh consumed accounted for at a zero emission factor**
44630

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Renewable Energy Certificates (RECs)

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
United States of America

**MWh consumed accounted for at a zero emission factor**
26320

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
China

**MWh consumed accounted for at a zero emission factor**
38265

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Hydropower

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
India

**MWh consumed accounted for at a zero emission factor**
13640

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Romania

**MWh consumed accounted for at a zero emission factor**

131

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Brazil

**MWh consumed accounted for at a zero emission factor**
796

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Hydropower

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Russian Federation

**MWh consumed accounted for at a zero emission factor**
4147

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Mexico

**MWh consumed accounted for at a zero emission factor**
128

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Portugal

**MWh consumed accounted for at a zero emission factor**
390

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Portugal

**MWh consumed accounted for at a zero emission factor**
80

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Sweden

**MWh consumed accounted for at a zero emission factor**
364

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Geothermal

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Philippines

**MWh consumed accounted for at a zero emission factor**
252

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, International REC Standard (I-RECs)

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Turkey

**MWh consumed accounted for at a zero emission factor**
129

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
France

**MWh consumed accounted for at a zero emission factor**
239

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Australia

**MWh consumed accounted for at a zero emission factor**
208

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Greece

**MWh consumed accounted for at a zero emission factor**
174

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Netherlands

**MWh consumed accounted for at a zero emission factor**
128

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**

Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Poland

**MWh consumed accounted for at a zero emission factor**
84

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Bulgaria

**MWh consumed accounted for at a zero emission factor**
36

**Comment**

---

**Sourcing method**
Green electricity products (e.g. green tariffs) from an energy supplier, not supported by energy attribute certificates

**Low-carbon technology type**
Other, please specify (Technology not known)

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Austria

**MWh consumed accounted for at a zero emission factor**
22

**Comment**

---

**Sourcing method**
Unbundled energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**
Wind

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**
Spain

**MWh consumed accounted for at a zero emission factor**
26379

**Comment**

---

## C-CG8.5

**(C-CG8.5) Does your organization measure the efficiency of any of its products or services?**

| | Measurement of product/service efficiency | Comment |
|---|---|---|
| Row 1 | Yes | |

## C-CG8.5a

**(C-CG8.5a) Provide details of the metrics used to measure the efficiency of your organization's products or services.**

**Category of product or service**
Stationary generators

**Product or service (optional)**
Wind turbines

**% of revenue from this product or service in the reporting year**
85

**Efficiency figure in the reporting year**
50

**Metric numerator**
megawatt hour (MWh)

**Metric denominator**
megawatt hour (MWh)

**Comment**
The energy balance of a wind power plant shows the relationship between the energy requirement over the whole life cycle of the power plant (i.e. manufacture, operation, service and disposal) and the energy it generates. Energy payback may be measured by 'number of times payback'. This is how many times more energy the wind plant generates over its lifetime compared to the amount consumed. Over its life cycle, a V117-4.2 MW wind power plant returns 50 times more energy back to society than it consumes. So, when 1 kWh is invested in a wind energy solution, a 50 kWh return is achieved. Vestas, (2019). Life Cycle Assessment of Electricity Production from an onshore V117-4.2 MW Wind Plant – 1 November 2019. Vestas Wind Systems A/S, Hedeager 42, Aarhus N, 8200, Denmark.

**Category of product or service**
Stationary generators

**Product or service (optional)**
Wind turbines

**% of revenue from this product or service in the reporting year**
85

**Efficiency figure in the reporting year**
5

**Metric numerator**
Other, please specify (Months)

**Metric denominator**
Not applicable

**Comment**
The energy balance of a wind power plant shows the relationship between the energy requirement over the whole life cycle of the power plant (i.e. manufacture, operation, service and disposal) and the energy it generates. This energy payback period is measured in 'months to achieve payback', and is reached when the energy requirement for the life cycle of the power plant equals the energy it has produced. For a V117-4.2 MW wind power plant has a payback period of under five months for high wind conditions. Vestas, (2019). Life Cycle Assessment of Electricity Production from an onshore V117-4.2 MW Wind Plant – 1 November 2019. Vestas Wind Systems A/S, Hedeager 42, Aarhus N, 8200, Denmark.

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

### C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

| | Investment in low-carbon R&D | Comment |
|---|---|---|
| Row 1 | Yes | |

### C-CG9.6a

**(C-CG9.6a) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.**

**Technology area**
Renewable energy

**Stage of development in the reporting year**
Applied research and development

**Average % of total R&D investment over the last 3 years**
81 - 100%

**R&D investment figure in the reporting year (optional)**
265000000

**Comment**
Research and development costs recognised in the income statement amounted to EUR 265m, slightly below the 2019 level of EUR 268m. The total research and development expenditure prior to capitalisation and amortisation decreased from EUR 372m in 2019 to EUR 331m in 2020, however, partly offset by higher amortisation costs as a result of bringing new technology to the market.

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

| | Verification/assurance status |
|---|---|
| Scope 1 | Third-party verification or assurance process in place |
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3 | Third-party verification or assurance process in place |

### C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Complete

**Type of verification or assurance**
Limited assurance

**Attach the statement**
CDP-verification VESTAS 2020.pdf

**Page/ section reference**
Page 3, section 2

**Relevant standard**
ISAE3000

**Proportion of reported emissions verified (%)**
100

### C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

**Scope 2 approach**
Scope 2 market-based

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Complete

**Type of verification or assurance**
Limited assurance

**Attach the statement**
CDP-verification VESTAS 2020.pdf

**Page/ section reference**
Page 3, section 2

**Relevant standard**
ISAE3000

**Proportion of reported emissions verified (%)**
100

## C10.1c

**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

**Scope 3 category**
Scope 3 (upstream & downstream)

**Verification or assurance cycle in place**
Annual process

**Status in the current reporting year**
Complete

**Type of verification or assurance**
Limited assurance

**Attach the statement**
CDP-verification VESTAS 2020.pdf

**Page/section reference**
Page 3, section 2

**Relevant standard**
ISAE3000

**Proportion of reported emissions verified (%)**
100

## C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**
Yes

## C10.2a

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

| Disclosure module verification relates to | Data verified | Verification standard | Please explain |
|---|---|---|---|
| C8. Energy | Energy consumption | ISAE3000 | Independent assurance report on the Sustainability key figures 2020, Annual Report 2020 page 132 210210_01_Annual_Report_2020.pdf |

# C11. Carbon pricing

## C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**
Yes

## C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**
Canada federal fuel charge
Denmark carbon tax
Finland carbon tax
France carbon tax
Ireland carbon tax
Portugal carbon tax
Sweden carbon tax

## C11.1c

**(C11.1c) Complete the following table for each of the tax systems you are regulated by.**

**Canada federal fuel charge**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
15000

**Comment**

**Denmark carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
86000

**Comment**

**Finland carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
17000

**Comment**

**France carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
100000

**Comment**

**Ireland carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
9000

**Comment**

**Portugal carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
14000

**Comment**

**Sweden carbon tax**

**Period start date**
January 1 2020

**Period end date**
December 31 2020

**% of total Scope 1 emissions covered by tax**
100

**Total cost of tax paid**
164000

**Comment**

## C11.1d

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

Vestas has an approved science-based target to reduce absolute scope 1 and 2 GHG emissions 100% by 2030 from a 2019 base year. In 2020, 35% of benefit cars were replaced by electric vehicles or plug in-hybrid vehicles. The target for 2021 is to reach 50% of benefit cars being replaced. By 2025, all benefit cars will be electric. In 2020, 127 service vans were replaced by electric vehicles or vehicles fuelled with second generation biodiesel. The target for 2021 is to replace another 207 service vans with renewable fuelled, either electric or biodiesel. By 2025, all new service vans will be renewably fuelled. In 2020, a location in Denmark switched from natural gas heating to district heating being 60% renewable. By 2030, all heating with natural gas will be transitioned to renewable energy.

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**
No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**
No, but we anticipate doing so in the next two years

# C12. Engagement

## C12.1

**(C12.1) Do you engage with your value chain on climate-related issues?**
Yes, our suppliers
Yes, our customers

## C12.1a

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**
Information collection (understanding supplier behavior)

**Details of engagement**
Collect climate change and carbon information at least annually from suppliers

**% of suppliers by number**
1

**% total procurement spend (direct and indirect)**
30

**% of supplier-related Scope 3 emissions as reported in C6.5**
52

**Rationale for the coverage of your engagement**
Based on Hot Spot Analysis for environmental footprint (CO2 and waste), and on key suppliers. Some may be small today but are expected to grow in coming years.

**Impact of engagement, including measures of success**
As part of our sustainability strategy, Vestas has set ambitious targets - including for scope 3 emission reductions. During 2020 we have engaged all strategic suppliers on sustainability. During 2020 we also had sustainability as the central theme for our annual supplier event. Formal supplier commitments have been set to environmental sustainability targets with milestones on CO2, renewable electricity, waste, incl. target setting., these commitments include high impact supply chain areas, such as raw materials (e.g. steel), transportation and blades.

**Comment**

---

**Type of engagement**
Engagement & incentivization (changing supplier behavior)

**Details of engagement**
Run an engagement campaign to educate suppliers about climate change
Climate change performance is featured in supplier awards scheme

**% of suppliers by number**
1

**% total procurement spend (direct and indirect)**
30

**% of supplier-related Scope 3 emissions as reported in C6.5**
52

**Rationale for the coverage of your engagement**
Based on Hot Spot Analysis for environmental footprint (CO2 and waste), and on key suppliers. Some may be small today, but are expected to grow in coming years.

**Impact of engagement, including measures of success**
As part of our sustainability strategy, Vestas has set ambitious targets - including for scope 3 emission reductions. During 2020 we have engaged all strategic suppliers on sustainability. During 2020 we also had sustainability as the central theme for our annual supplier event. Formal supplier commitments have been set to environmental sustainability targets with milestones on CO2, renewable electricity, waste, incl. target setting., these commitments include high impact supply chain areas, such as raw materials (e.g. steel), transportation and blades.

**Comment**
No further comments

---

## C12.1b

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement**
Education/information sharing

**Details of engagement**
Share information about your products and relevant certification schemes (i.e. Energy STAR)

**% of customers by number**
100

**% of customer - related Scope 3 emissions as reported in C6.5**
100

**Portfolio coverage (total or outstanding)**
<Not Applicable>

**Please explain the rationale for selecting this group of customers and scope of engagement**
Wind turbines are an important part of the climate solution and it is natural to engage customers on how our products perform on climate impact and how to improve the scope 3 supply chain impact. Customer requirements are important inputs for Vestas to deliver on the product specifications guided by the customer. At the same time our detailed supply chain work can also be of inspiration to our customers for setting, updating and improving their climate impact requirements. Furthermore, Vestas has for decades calculated and shared Life Cycle Assessments (LCAs) with customers and for many years offered costumers full site LCAs for their wind plant installations as a way to concretely optimize the environmental impact of the full installations for their full expected lifetime.

**Impact of engagement, including measures of success**
Measures of success is to bring transparency to customers on climate impact in the supply chain and initiating collaborative activities to reduce climate change in the supply chain. Success is measured by amount climate emission reduction in the supply chain per MWh generated.

## C12.3

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**
Direct engagement with policy makers
Trade associations
Funding research organizations

## C12.3a

**(C12.3a) On what issues have you been engaging directly with policy makers?**

| Focus of legislation | Corporate position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| Clean energy generation | Support | As a wind turbine manufacturer, we are engaged in local and global representation of interests in support for more clean energy generation. Our focus is on energy and renewable energy legislation in our key and new emerging markets. Our activities include direct communication with political decision makers and participation in consultations and public hearings - also via associations. | To mitigate climate change, reduce energy imports and reduce air pollution, clean energy generation is a logical solution to these challenges. Increased wind energy deployment has furthermore the advantage to lower the water intensity of electricity generation. Vestas therefore supports ambitious climate change mitigation policies as well as policies aiming at increasing the share of renewable power generation. |

## C12.3b

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**
Yes

## C12.3c

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**
GWEC

**Is your position on climate change consistent with theirs?**
Consistent

**Please explain the trade association's position**
The Global Wind Energy Council is the international trade association for the wind power industry - www.gwec.net.

**How have you influenced, or are you attempting to influence their position?**
We participate in board meetings and working group meetings in order to safeguard and promote our interests.

---

**Trade association**
Wind Europe

**Is your position on climate change consistent with theirs?**
Consistent

**Please explain the trade association's position**
The European Wind Energy Association is the European trade association for the wind power industry - www.windeurope.org.

**How have you influenced, or are you attempting to influence their position?**
We participate in board meetings and working group meetings in order to safeguard and promote our interests.

---

**Trade association**
AWEA

**Is your position on climate change consistent with theirs?**
Consistent

**Please explain the trade association's position**
The American Wind Energy Association is the US trade association for the wind power industry - www.awea.org

**How have you influenced, or are you attempting to influence their position?**
We participate in board meetings and working group meetings in order to safeguard and promote our interests.

---

**Trade association**
National Wind Energy Associations

**Is your position on climate change consistent with theirs?**
Consistent

**Please explain the trade association's position**
We are members of multiple national wind energy associations in Europe, Asia and in other regions (Examples: DK, UK, SWE, GER, FR, ESP, PL, IT, RO, CHN, AUS, CAN, KR, NO, FIN, UKR, etc.) Their position is to promote wind energy in the national energy mix.

**How have you influenced, or are you attempting to influence their position?**
We participate in board meetings and working group meetings in order to safeguard and promote our interests.

---

## C12.3d

**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**
Yes

## C12.3f

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

It is the Public Affairs department in Vestas that coordinates the processes in place which ensure that Vestas' direct and indirect activities that influence policy are consistent with our overall climate change strategy. The Public Affairs department is headed by the Group Senior Vice President for Marketing, Communication, Sustainability and Public Affairs who is also reporting to our CEO and President. The public affairs (PA) processes include: global PA strategy, global PA action plans, regional and national PA action plans, and development of PA key performance indicators to secure a common and coherent approach to Vestas' climate change strategy. With respect to climate change and sustainability issues, there is a close coordination between the Public Affairs department and the Corporate Social Responsibility department in Vestas to ensure consistency in our strategy and our political as well as general communication. As an example, new regulations such as the discussed EU carbon border adjustment mechanism (CBAM) is evaluated on impacts and opportunities both from a company perspective and a societal perspective to secure that direct and indirect activities that influence policy are consistent with our overall climate change strategy. This is done in a cross organizational effort.

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**
In mainstream reports, incorporating the TCFD recommendations

**Status**
Complete

**Attach the document**
210210_01_Annual_Report_2020.pdf
Sustainability_Report_2020.pdf

**Page/Section reference**
Page 33 of the sustainability report 2020 and page 012 on strategy in the Annual Report.

**Content elements**
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

**Comment**

---

**Publication**
In mainstream reports

**Status**
Complete

**Attach the document**
210210_01_Annual_Report_2020.pdf
Sustainability_Report_2020.pdf

**Page/Section reference**
Page 019-024 of the annual report is dedicated to an update on our sustainability effort incl. climate. Page 32-33 + 38 + 49 of the sustainability report is linked to climate focus. The full reports focus on climate mitigation through our product wind turbine offerings.

**Content elements**
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

**Comment**

---

**Publication**
In voluntary communications

**Status**
Complete

**Attach the document**
EnVentus_Brochure_Q12021.pdf

**Page/Section reference**
All pages. The EnVentus platform brochure is a good example of a lot of voluntary communication on our wind turbine products that are an important part of the climate change mitigation solution.

**Content elements**
Other metrics

**Comment**

---

## C15. Signoff

## C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

No additional information.

## C15.1

**(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

| | Job title | Corresponding job category |
|---|---|---|
| Row 1 | Group President & CEO of Vestas Wind Systems A/S | Chief Executive Officer (CEO) |

## SC. Supply chain module

### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

The contribution of Vestas' business partners to the overall footprint of its products is considerable. For example, when producing a wind turbine, around 80% to 90% of the CO2 emissions can be linked to business partners in the supply chain. Clearly, in order to lower the CO2 emissions of its products, Vestas has to improve its footprint and the energy balance of its turbines.

While monitoring is an essential and valuable tool, it cannot alone achieve positive changes in the supply chain. That is why Vestas' long-term strategy is to work with suppliers and customers in partnerships to improve their sustainability performance together.

### SC0.1

**(SC0.1) What is your company's annual revenue for the stated reporting period?**

| | Annual Revenue |
|---|---|
| Row 1 | 14819000000 |

### SC0.2

**(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?**
Yes

### SC0.2a

**(SC0.2a) Please use the table below to share your ISIN.**

| | ISIN country code (2 letters) | ISIN numeric identifier and single check digit (10 numbers overall) |
|---|---|---|
| Row 1 | DK | 0010268606 |

### SC1.1

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

**Requesting member**
Vattenfall Group

**Scope of emissions**
Scope 1

**Allocation level**
Company wide

**Allocation level detail**
<Not Applicable>

**Emissions in metric tonnes of CO2e**
13

**Uncertainty (±%)**

**Major sources of emissions**
Marine gas oil from vessels

**Verified**
No

**Allocation method**
Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

---

**Requesting member**
Ørsted

**Scope of emissions**
Scope 1

**Allocation level**
Company wide

**Allocation level detail**
<Not Applicable>

**Emissions in metric tonnes of CO2e**
8611

**Uncertainty (±%)**

**Major sources of emissions**
Marine gas oil from vessels

**Verified**
No

**Allocation method**
Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

---

**Requesting member**
Naturgy Energy Group SA

**Scope of emissions**
Scope 1

**Allocation level**
Company wide

**Allocation level detail**
<Not Applicable>

**Emissions in metric tonnes of CO2e**
2431

**Uncertainty (±%)**

**Major sources of emissions**
Service diesel for vehicles

**Verified**
No

**Allocation method**
Allocation based on the volume of products purchased

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**
Based on MW serviced

---

**Requesting member**
SSE

**Scope of emissions**
Scope 1

**Allocation level**
Company wide

**Allocation level detail**
<Not Applicable>

**Emissions in metric tonnes of CO2e**
203

**Uncertainty (±%)**

**Major sources of emissions**
Service diesel for vehicles

**Verified**
No

**Allocation method**
Allocation based on the volume of products purchased

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**
Based on MW serviced

---

## SC1.2

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

## SC1.3

**(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

| Allocation challenges | Please explain what would help you overcome these challenges |
|---|---|
| Customer base is too large and diverse to accurately track emissions to the customer level | The two allocation methods used to apportion Sales Business Unit and Production Business Unit emissions provide a reasonable and accurate overall allocation method. They are designed to focus on the principal GHG emission sources. Vestas closely monitors the performance of its Business Units and the performance and operation of its turbines, as previously described in SM1.2. This provides accurate and sufficient data to adopt a reasonable and customer-specific allocation method. The allocation could be improved for Sales Business Units by: • distinguishing in further detail between sources of emissions from offices, installation and servicing. Currently, it has not been possible to accurately distinguish fuel and energy for installation of new wind power plants (installed in reporting year). This would slightly improve accuracy of results. • Alternative allocation methods are also available (such as allocation based on “number of turbines”, “proportion of wind turbines that require a service visit”, “GWh generated”). These are also reasonable methods for allocation and each has differing underlying assumptions and depth of data collection requirements. The allocation for Production Business Units could be improved by: • Avoiding the need to conduct any allocation. This may be achieved by conducting further product-specific life cycle assessments of Vestas turbines that are not assessed already. Vestas has plans to conduct further LCAs of its wind turbine products and in some cases to conduct customer-specific life cycle assessments of a wind power plant. |

## SC1.4

**(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?**

No

## SC1.4b

**(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.**

The allocation method already used is detailed and suitable.

## SC2.1

**(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.**

**Requesting member**
Naturgy Energy Group SA

**Group type of project**
New product or service

**Type of project**
New product or service that reduces customers products / services operational emissions

**Emissions targeted**
Actions that would reduce both our own and our customers’ emissions

**Estimated timeframe for carbon reductions to be realized**
0-1 year

**Estimated lifetime CO2e savings**
4000

**Estimated payback**
0-1 year

**Details of proposal**
Vestas is implementing electric vehicles for service team leaders and area managers. This could be an area of collaboration if service vans could be electric and the Electric vehicles could be charged at the Wind farms to increase driving range.

**Requesting member**
SSE

**Group type of project**
New product or service

**Type of project**
New product or service that reduces customers products / services operational emissions

**Emissions targeted**
Actions that would reduce both our own and our customers’ emissions

**Estimated timeframe for carbon reductions to be realized**
0-1 year

**Estimated lifetime CO2e savings**
3500

**Estimated payback**
0-1 year

**Details of proposal**
Vestas is implementing electric vehicles for service team leaders and area managers. This could be an area of collaboration if service vans could be electric and the Electric vehicles could be charged at the Wind farms to increase driving range.

---

**Requesting member**
Naturgy Energy Group SA

**Group type of project**
New product or service

**Type of project**
New product or service that reduces customers products / services operational emissions

**Emissions targeted**
Actions that would reduce both our own and our customers' emissions

**Estimated timeframe for carbon reductions to be realized**
Other, please specify (Realized over the lifetime of new wind)

**Estimated lifetime CO2e savings**

**Estimated payback**
Other, please specify (Realized over the lifetime of new wind)

**Details of proposal**
Vestas has developed new advanced repair services for turbine operation and maintenance which includes a comprehensive offering of up- and down-tower repair solutions for gearboxes, generators, minor components and blades. These offerings include: GeneratorCare™, GearboxCare™ and BladeCare™.

---

**Requesting member**
SSE

**Group type of project**
New product or service

**Type of project**
New product or service that reduces customers products / services operational emissions

**Emissions targeted**
Actions that would reduce both our own and our customers' emissions

**Estimated timeframe for carbon reductions to be realized**
Other, please specify (Realized over the lifetime of new wind)

**Estimated lifetime CO2e savings**

**Estimated payback**
Other, please specify (Realized over the lifetime of new wind)

**Details of proposal**
Vestas has developed new advanced repair services for turbine operation and maintenance which includes a comprehensive offering of up- and down-tower repair solutions for gearboxes, generators, minor components and blades. These offerings include: GeneratorCare™, GearboxCare™ and BladeCare™.

---

**Requesting member**
Ørsted

**Group type of project**
New product or service

**Type of project**
New product or service that reduces customers products / services operational emissions

**Emissions targeted**
Actions that would reduce both our own and our customers' emissions

**Estimated timeframe for carbon reductions to be realized**
Other, please specify (5-10)

**Estimated lifetime CO2e savings**
70000

**Estimated payback**
Other, please specify

**Details of proposal**
Upgrade currently used Vessels (SOV, CTV, W"W, OIV) for Installation/Service activities to use renewable fuels instead of carbon fuels.

---

## SC2.2

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**
No

## SC4.1

**(SC4.1) Are you providing product level data for your organization's goods or services?**
Yes, I will provide data

## SC4.1a

**(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.**
99.9

## SC4.2a

**(SC4.2a) Complete the following table for the goods/services for which you want to provide data.**

**Name of good/ service**
V150-4.2 MW

**Description of good/ service**
Wind turbine - onshore, IECIIIB (low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
7300

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 17 2020

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V136-4.2 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
5600

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 17 2020

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V136-3.45 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB/IIIA (medium/low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
5500

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 17 2020

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V126-3.45 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB/IIA (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
6400

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 13 2017

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V117-4.2 MW

**Description of good/ service**
Wind turbine - onshore, IECIB/IIA (high/medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
4400

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 17 2020

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V117-3.45 MW

**Description of good/ service**
Wind turbine - onshore, IECIB/IIA (high/medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
5100

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 13 2017

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V112-3.45 MW

**Description of good/ service**

Wind turbine - onshore, IECIA (high wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
5300

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 13 2017

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V105-3.45 MW

**Description of good/ service**
Wind turbine - onshore, IECIA (high wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
4800

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 13 2017

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V120-2.2 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
7200

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 1 2018

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V116-2.0 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
5000

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 1 2018

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V110-2.0 MW

**Description of good/ service**
Wind turbine - onshore, IECIIIA (low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
7200

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
December 1 2015

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V100-2.0 MW

**Description of good/ service**
Wind turbine - onshore, IECIIB (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
6200

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
December 1 2015

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V90-2.0 MW

**Description of good/ service**
Wind turbine - onshore, IECIIA (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
9700

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
July 1 2013

**Explanation of change**

**Methods used to estimate lifecycle emissions**
ISO 14040 & 14044

---

**Name of good/ service**
V150-5.6 MW

**Description of good/ service**
Wind turbine - onshore, special wind class (medium wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh] (Streamlined LCA)

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
7800

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
November 21 2019

**Explanation of change**

**Methods used to estimate lifecycle emissions**
Please select

---

**Name of good/ service**
V162-5.6 MW

**Description of good/ service**
Wind turbine - onshore, special wind class (low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh] (Streamlined LCA)

**Type of product**
Final

**SKU (Stock Keeping Unit)**

**Total emissions in kg CO2e per unit**
7800

**±% change from previous figure supplied**
0

**Date of previous figure supplied**
November 21 2019

**Explanation of change**

**Methods used to estimate lifecycle emissions**
Please select

---

## SC4.2b

**(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.**

**Name of good/ service**
V136-4.2MW (onshore, IECIIIA, low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Please select the scope**
Scope 1, 2 & 3

**Please select the lifecycle stage**
Cradle to gate

**Emissions at the lifecycle stage in kg CO2e per unit**
10200

**Is this stage under your ownership or control?**
Yes

**Type of data used**
Primary and secondary

**Data quality**
Third party ISO reviewed LCA to ISO14040/44.

**If you are verifying/assuring this product emission data, please tell us how**
The review is performed as a critical review by an independent external Expert according to paragraph 6.2 of ISO 14044 (2006). The reviewer was selected according to international expertise in the field of sustainability and of reviewing technical LCA studies.

---

**Name of good/ service**
V136-4.2MW (onshore, IECIIIA, low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Please select the scope**
Scope 1, 2 & 3

**Please select the lifecycle stage**
Other, please specify (Transport, Installation and operation)

**Emissions at the lifecycle stage in kg CO2e per unit**
1300

**Is this stage under your ownership or control?**
No

**Type of data used**
Primary and secondary

**Data quality**
Third party ISO reviewed LCA to ISO14040/44.

**If you are verifying/assuring this product emission data, please tell us how**
The review is performed as a critical review by an independent external Expert according to paragraph 6.2 of ISO 14044 (2006). The reviewer was selected according to international expertise in the field of sustainability and of reviewing technical LCA studies.

---

**Name of good/ service**
V136-4.2MW (onshore, IECIIIA, low wind) Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per MWh]

**Please select the scope**
Scope 1, 2 & 3

**Please select the lifecycle stage**
End of life/Final disposal

**Emissions at the lifecycle stage in kg CO2e per unit**
3900

**Is this stage under your ownership or control?**
No

**Type of data used**
Primary and secondary

**Data quality**
The emissions at the lifecycle stage are deducted from the overall lifecycle so the value is negative. Third party ISO reviewed LCA to ISO14040/44.

**If you are verifying/assuring this product emission data, please tell us how**
The review is performed as a critical review by an independent external Expert according to paragraph 6.2 of ISO 14044 (2006). The reviewer was selected according to international expertise in the field of sustainability and of reviewing technical LCA studies.

---

## SC4.2c

**(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.**

| Name of good/ service | Initiative ID | Description of initiative | Completed or planned | Emission reductions in kg CO2e per unit |
|---|---|---|---|---|
| SF6 Gas end-of-life Management Service Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per kWh] | Initiative 1 | Collection and safe disposal service of SF6-containing switchgears used on Vestas turbines - Eliminates the end-of-life environmental impact of SF6 gas in switchgears - Minimises the overall lifetime greenhouse gas emission by some 10% per wind turbine - Provides turbine owners with a positive greenhouse gas reduction - Enables safe recovery and reuse of SF6 gas In compliance with the objectives of the voluntary SF6 directives | Completed | 640 |
| Renewable electricity consumption target of 100% across all business units Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per kWh] | Initiative 2 | Vestas has established targets to consume significant proportion of renewable energy across all business units. Vestas life cycle assessment accounts for all business unit performance giving traceability at a product level and business level for reduced GHG emissions. | Completed | 100 |
| Repair of gearboxes and generators both down-tower and up-tower. Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per kWh] | Initiative 3 | Vestas has developed new advanced repair services for turbine operation and maintenance which includes a comprehensive offering of up- and down-tower repair solutions for gearboxes, generators, minor components and blades. Vestas life cycle assessment is used to determine GHG emissions reduction, giving up to 85% reduction of material weight and up to 95% saving of GHG emissions for the repaired item. At a wind turbine product-level, gearbox repair, for example, equates to around 2-3% total reduced GHG emissions. | Ongoing | 100 |
| CO2 limit for all new service vehicles. Unit = kg of CO2 per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO2 per kWh] | Initiative 4 | To limit the usage of fossil fuel in the growing service business, CO2 limits have been introduced for all new service vehicles. In addition, action plans are under development regionally to minimise carbon emissions in general from vehicles in connection with service. | Ongoing | 10 |

## SC4.2d

**(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?**

No

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

| | I am submitting to | Public or Non-Public Submission | Are you ready to submit the additional Supply Chain questions? |
|---|---|---|---|
| I am submitting my response | Investors<br>Customers | Public | Yes, I will submit the Supply Chain questions now |

**Please confirm below**

I have read and accept the applicable Terms