

C0. Introduction

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C0.1

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

**Already avoided the emission of more than 1.7 billion tonnes of CO<sub>2</sub>**

For 40 years, Vestas has operated in the field of wind power. Vestas has the wind industry’s largest installed base of more than 154 GW of wind turbines in 87 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 132 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 154 GW of wind turbines installed in 87 countries, our sustainable energy solutions have already avoided the emission of more than 1.7 billion tonnes of CO<sub>2</sub> 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

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(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 2021	December 31 2021	No	<Not Applicable>

C0.3

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**(C0.3) Select the countries/areas in which you operate.**

- Argentina
- Australia
- Austria
- Belgium
- 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
- Russian Federation
- Saudi Arabia
- Senegal
- South Africa
- Spain
- Sweden
- Taiwan, 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

**C0.8**

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	DK0061539921

**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-level committee	<p>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 &amp; Manufacturing Committee that among other duties assist the Board of Directors by reviewing information under the area "Monitor and evaluate sustainability". Furthermore, according to the Audit Committee's charter the climate risk assessment are linked to the financial reporting and therefore handled by the Audit Committee and reported to the Board on an annual base. In 2021, we did not define any climate-related risks among our principal risks. However, such risks are continuously monitored and evaluated by the Risk Committee, the board committees, and the Board.</p> <p>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 &amp; Manufacturing Committee, and the Nomination &amp; 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.</p> <p>In connection with the Board Strategy Seminar 2021 the board was updated on sustainability strategy and the Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on 20 April 2021 . Furthermore, the BoD has been updated on CO2 reduction progress every quarter since the BoD approval of the sustainability strategy in Oct 2019. This is done as part of the update on strategy execution reporting to the Board.</p> <p>As we need to continue to create and service products that are critical for climate change mitigation, while leading the energy transition, the Nomination and Compensation committed approved the CO2e avoided KPI for the employee bonus programme on Dec 14th 2021.</p>

## 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	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> <li>Monitoring implementation and performance of objectives</li> <li>Overseeing major capital expenditures, acquisitions and divestitures</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<Not Applicable>	<p>Reviewing, setting performance objectives, monitoring and overseeing is all part of the governance mechanisms into which climate-related issues are integrated.</p> <p>In 2021, Vestas did not define any climate-related risks among its principal risks. However, such risks are continuously monitored and evaluated by the Risk Committee, the board committees, and the Board.</p> <p>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.</p> <p>10 board meetings were conducted in 2021 and four meetings in the Audit Committee as well as four meetings in the Technology &amp; Manufacturing Committee were conducted.</p> <p>In connection with the Board Strategy Seminar 2021 the board was updated on sustainability strategy and the individual KPIs were reviewed. Furthermore The new Circularity strategy with the ambition of achieving full circularity by 2040 was presented. The Technology and Manufacturing Committee was updated on progress towards the CO2 reduction targets on 20 April 2021 . Furthermore, the BoD has been updated on CO2 reduction progress every quarter as part of the strategy execution update.</p>

## C1.1d

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	On a board level we see the combination of the following competences essential for dealing with climate-related issues in a value adding way: * In-depth knowledge of sustainability * In-depth knowledge of the renewable energy industry. * In-depth knowledge of corporate management including knowledge of strategy execution, * In-depth knowledge of strategic management of international and political organisations. All of these competences are represented in the Vestas' Board of Directors.	<Not Applicable>	<Not Applicable>

**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>	Both assessing and managing 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 VP, Head of Sustainability is reporting directly to the Group President and CEO on a monthly basis.

The Group President and CEO assesses and 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.

**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 incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target	The Vestas bonus program is linked to: EBIT margin, Free Cash Flow, and Avoided Emissions. 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 and bond agreements where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned.  Via the solid link to our sustainability linked loan and bond agreements 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, and Avoided Emissions. 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 and bond agreements where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned.  Via the solid link to our sustainability linked loan and bond agreements our Science Based Targets Initiative approved climate change mitigation targets for scope 1+2+3 are linked to the overall bonus targets.
Chief Procurement Officer (CPO)	Monetary reward	Emissions reduction target	The Vestas bonus program is linked to: EBIT margin, Free Cash Flow, and Avoided Emissions. 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 and bond agreements where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned.  Via the solid link to our sustainability linked loan and bond agreements our Science Based Targets Initiative approved climate change mitigation targets for scope 1+2+3 are linked to the overall bonus targets.
All employees	Monetary reward	Emissions reduction target	The Vestas bonus program is linked to: EBIT margin, Free Cash Flow, and Avoided Emissions. 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 and bond agreements where our sustainable targets e.g. climate change in scope 1+2+3 are mentioned.  Via the solid link to our sustainability linked loan and bond agreements our Science Based Targets Initiative approved climate change mitigation targets for scope 1+2+3 are linked to the overall bonus targets.

**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*

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**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.

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C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>Vestas is very dependent on current regulation, as transition risks are directly linked to extensive policy changes needed for transitioning to a low-carbon economy.</p> <p>An example of a risk within current regulation is New carbon related regulation e.g., carbon tax or carbon border adjustment mechanisms (CBAM) as this can lead to Increased cost of raw materials.</p> <p>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.</p> <p>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.</p>
Emerging regulation	Relevant, always included	<p>Vestas is closely monitoring emerging regulation and and specific transition risks such as carbon related regulation that are directly linked to extensive policy changes needed for transitioning to a low-carbon economy.</p> <p>To provide an example of a specific emerging risk area (risk driver) we consider the carbon tax or carbon border adjustment mechanisms (CBAM) as this can potentially increase carbon pricing and 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</p> <p>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.</p> <p>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.</p>
Technology	Relevant, always included	<p>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&amp;D area of Vestas, to progress this transition.</p> <p>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.</p>
Legal	Relevant, always included	<p>Policy and legal risks are important areas of our climate related risk assessment and closely linked to our work on current and emerging regulation.</p> <p>As a leading wind turbine manufacturer, policy and legal implications could have significant impact on our business going forward.</p> <p>Extensive legal changes needed for transitioning to a low-carbon economy are directly linked to various transition risks.</p> <p>An example of a policy and legal risk we can mention Stricter GHG emission reduction legislation</p> <p>As part of our climate-related risk assessment this has also been further detailed out in C2.3.</p>
Market	Relevant, always included	<p>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.</p> <p>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.</p>
Reputation	Relevant, always included	<p>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.</p> <p>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.</p>
Acute physical	Relevant, always included	<p>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.</p> <p>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.</p>
Chronic physical	Relevant, always included	<p>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.</p> <p>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.</p>

**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?**

Direct operations

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

Emerging regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased indirect (operating) costs

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

<Not Applicable>

**Company-specific description**

Situation: The transition into a low carbon economy is with the Paris Agreement as the binding international treaty on climate change going to be a much needed and massive change to the way business are running today. The treaty 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. 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. Vestas wind turbines are big industrial installations that take years to plan and install and are typically sold years in advance of the delivery. Therefore, the potential impact of increased carbon prices either market or politically motivated can have significant impact on Vestas' price structure. The market is very competitive, and it is only expected that a small part of the risk can be mitigated through higher prices towards customers. Task: To understand this risk we have in the last years assessed and reported on the climate impact of the Vestas unique supply chain. The carbon footprint is calculated to approximately 11 million tons CO2 in 2021. Furthermore, we are working on understanding the possibilities of decarbonizing the supply chain and own operations. To translate the gained knowledge into a risk we also started looking at the current and expected future carbon prices. Action: Based on the calculation of the unique climate impact from Vestas and a realization that the current climate prize is not reflecting the real cost of change needed to transition into a 1.5 degree scenario we started looking for quantifying the risk and listing mitigation actions. Result: A solid climate strategy as part of the overall sustainability strategy has been developed to mitigate the risk. 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 currently AI based software solutions and reporting tools are being implemented as 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)**

55000000

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

138000000

**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 11 million tons CO2 in 2021 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. We assumed a carbon price increase of 20-50 EUR/tCO2 as likely and estimated the potentially impact on Vestas to 55M-138M 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**

Situation: Climate and sustainability are becoming increasingly important for society, Vestas, and our customers. The rapid transition to a lower carbon economy is getting closer and the risk of price impacts due to increasing climate prices is growing. 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. Task: As part of the Vestas' sustainability strategy "sustainability in every thing we do" a focus on improving our own environmental performance including our scope 1 and 2 emission have been set

Action: 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.

Result: Since setting the targets with baseline year 2019 the scope 1+2 emissions have been reduced by approximately 10%. Costs: Sustainability activities planned for e.g., energy optimization and carbon emission reductions at production sites in the coming years as part of the "Must Win Battle" Sustainably 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

C2.4

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**(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

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**(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**

Situation: 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. The offshore wind market alone is according to Global Wind Energy Council (GWEC) Market Intelligence forecasted to increase towards 2030 with more than 205 GW of new offshore wind capacity to be added globally. Task: Vestas is currently the world leader in the onshore wind turbine market and wants to be at top player in offshore market as well. Action: Integrate the partly (50%) owned MHI Vestas Offshore Wind (MVOW) into Vestas and grow the offshore business. Result: This fantastic climate related opportunity is now fully integrated with Vestas. 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.

PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2022 outlook as given in the annual report 2021 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 2021 and may be subject to change.

**Time horizon**

Medium-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**

The calculations below are based on the guidance in the public full year Vestas 2022 outlook as given in the annual report 2021.

According to the Vestas annual report 2021 the forecast for offshore in 2025 is indicated at +3'000'000'000 EUR.

The group EBIT long-term outlook given in the Vestas annual report 2021 of at least 10% EBIT margin can be used to calculate an estimated EBIT of 300'000'000 EUR for 2025. (3'000'000'000\*0,10). The EBIT in 2020 was reported around zero making this a 300'000'000 EUR opportunity for Vestas .

PLEASE NOTE: This calculation is estimated based on the public full year Vestas 2022 outlook as given in the annual report 2021 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 2021 and may be subject to change.

**Cost to realize opportunity**

709000000

**Strategy to realize opportunity and explanation of cost calculation**

Situation: Vestas owns 50% of MHI Vestas Offshore Wind (MVOW) and needs to take full control to release the opportunity of the growing offshore wind turbine market. Task: Negotiate a deal with Mitsubishi Heavy Industries, Ltd. (MHI) for them to sell their 50% share in MHI Vestas Offshore Wind (MVOW) to Vestas. Action: Execute negotiations with Mitsubishi Heavy Industries, Ltd. (MHI) Result: 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. Vestas is since end of 2020 the full owner of MHI Vestas Offshore Wind (MVOW) and have during 2021 integrated the activities into Vestas to presume the opportunity in the offshore wind turbine market. Cost: According the press release informing about the acquisition the transaction of Vestas acquiring MHI Vestas Offshore Wind (MVOW) 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.

**Comment**

No further comments

### C3. Business Strategy

#### C3.1

##### (C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

###### Row 1

###### Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

###### Publicly available transition plan

Yes

###### Mechanism by which feedback is collected from shareholders on your transition plan

We do not have a feedback mechanism in place, but we plan to introduce one within the next two years

###### Description of feedback mechanism

<Not Applicable>

###### Frequency of feedback collection

<Not Applicable>

###### Attach any relevant documents which detail your transition plan (optional)

SLB Framework is giving yearly committed and reviewed targets towards 2030 and Vestas have SBTi targets approved including a commitment that aligns with a 1.5°C world. All public at Vestas.com or SBTi webpage.

###### Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

<Not Applicable>

###### Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

#### C3.2

##### (C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

#### C3.2a

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices		
<table border="1"> <tr> <td>Transition scenarios</td> <td>IEA NZE 2050</td> </tr> </table>	Transition scenarios	IEA NZE 2050	Company-wide	<Not Applicable>	<p>Parameters: This backward engineered scenario investigates how meeting net-zero emissions by 2050 could be done. This is the boldest IEA scenario, requiring immediate increase of policy action, clean energy investments (incl. infrastructure) and behavioral change. This are parameters that have been keen in choosing this scenario for testing the transitional risks.</p> <p>Assumptions We have assumed a rapid global introduction of climate regulation and carbon tax impacting the global supply chain and mobility of products.</p> <p>Analytical choices: Impact of sales as also shown in our annual report 2021 page 17 have been given priority as the transition will be fantastic opportunity for Vestas towards 2050 chosen as the time horizon.</p>
Transition scenarios	IEA NZE 2050				
<table border="1"> <tr> <td>Physical climate scenarios</td> <td>RCP 4.5</td> </tr> </table>	Physical climate scenarios	RCP 4.5	Company-wide	<Not Applicable>	<p>Parameters This is seen as a likely scenario if changes willingness is seen lagging and toward 2040 a increasing emission will be seen. The scenario has been chosen to keep some what optimistic about the 2021 emission and still deal with the here and now physical risk impacts.</p> <p>Assumptions We have assumed a high change in e.g., people facing extreme heatwaves, extreme rainfall and floods making massive disruption in the supply chain leading to delays in delivering our products and/or increased cost of sourcing.</p> <p>Analytical choices Impact of sales as also shown in our annual report 2021 page 17 have been given priority as the missing transition could have high impact on the market for wind turbines.</p>
Physical climate scenarios	RCP 4.5				

#### C3.2b

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

**Row 1**

**Focal questions**

How could climate change affect Vestas, our supply chain and product? What should we do, and when? This is the focal questions for Vestas based on the TCFD guidance.

**Results of the climate-related scenario analysis with respect to the focal questions**

How could climate change affect Vestas, our supply chain and product?: The results are focused on the sales opportunities as provided in the Annual Report 2022 on page 17. It can here be seen that the net zero market would lead to a yearly market in excess of 300 GW installations towards 2050. This should be seen in relation to a current market that in around 40 years have installed 700 GW. This will be a missive change for our supply chain and new bigger products are to be developed. Currently the V236 15.0MW is being developed and tested. One big offshore turbine can generate 80GWh of power per year depending on site specific conditions. However the work has also lead to the inclusion of climate related risks in our enterprise risk management system that now brings this important risk area into the overall risk picture for Vestas. By integrating the climate related risks into the enterprise risk management system it has been secured that regularly updates on climate related risks are carried out integrated with other important risk areas. What should we do, and when?: The sustainability strategy - "Sustainability in everything we do" is including climate change mitigation and adaptation as an answer to what should we do, and when? To work science based is key to Vestas and as a mitigating action Vestas has since 2020 set and worked towards Science Based Targets approved by SBTi and linked to all relevant scopes (scope 1, 2, and 3). Climate impact have been chosen as a variable that we need to understand at a transactional level. Therefore Vestas is currently implementing AI based IT systems to secure full transparency on climate impact for procurement, R&D and supply chain with the target to reduce impact in scope 3 by 45% per MWh delivered to the market based on a 2019 baseline.

**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	<p>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&amp;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.</p> <p>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.</p>
Supply chain and/or value chain	Yes	<p>Integrating sustainability into everything we do is part of our vision of becoming the global leader in sustainable energy solutions. The rapid decarbonization of the global energy supply is critical to limit global warming to 1.5°C above pre-industrial levels. In virtually every climate abatement scenario, a mass deployment of renewable energy this decade is an essential first step in decarbonizing global energy demand.</p> <p>We have created a strategic roadmap to both lead the transition to a world powered by sustainable products as well as to improve our own environmental performance. To reach our targets, we are ramping up our efforts to integrate sustainability across our value chain.</p> <p>Case Study: Reducing emissions from across our supply chain is the key lever to reduce scope 3 emissions and will require a partnership approach to sustainability. Therefore, Vestas has entered into partnerships with some of our suppliers, working to reduce emissions from our "hot spot areas" including transport and industrial coatings. Vestas is also in close dialogue with steel suppliers with the purpose to accelerate the availability of low carbon emission steel which is vital to achieve our CO2 emission reduction target. In 2022, Vestas is very proud to have joined as a member of the World Economic Forum's "First Movers Coalition" with a firm commitment to purchase at least 10% or out steel from breakthrough technologies (e.g., DRI) by 2030.</p> <p>In 2022, digitalization of sustainability data remains a key focus. We are currently implementing new digital platform that will enable insight on the impact of design choices, forecasting based on business scenarios, and a strong data foundation for dialogues on trade-offs i.e. understanding sustainability and cost impacts of a given decision. Integrating primary supplier data on both CO2 emissions and waste in the digital tool enables tracking of progress in the supply chain and benchmarking of suppliers on sustainability criteria.</p>
Investment in R&D	Yes	<p>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&amp;D periodization. R&amp;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.</p> <p>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&amp;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.</p>
Operations	Yes	<p>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.</p> <p>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. Again in 2021 we achieved a 100% renewable electricity for own operations.</p>

## 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 Direct costs Capital expenditures	<p>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. The current planning process is covering 2022 and 2H 2022 the planning for 2023 will start.</p> <p>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.</p> <p>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.</p>

## C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

Yes

### C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.

**Financial Metric**

Revenue

**Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)**

100

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)**

100

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)**

100

**Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world**

Vestas is selling and servicing one of the most important solutions needed for reaching a 1.5°C world - wind turbines!  
All of our revenue is and will be aligned with a 1.5°C world.

## C4. Targets and performance

### C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

Intensity target

### 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)**

Scope 1

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2019

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

65978

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

48199

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

114176

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

<Not Applicable>

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2030

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

100

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

0

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

100

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

100

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

<Not Applicable>

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

101963

**% of target achieved relative to base year [auto-calculated]**

10.6966437780269

**Target status in reporting year**

Underway

**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 target coverage and identify any exclusions**

All scope 1 and market-based scope 2 emissions are included

**Plan for achieving target, and progress made to the end of the reporting year**

We are committed to reducing emissions from our own operations by 55 percent by 2025, and 100 percent by 2030. With new levels of activity following the integration of MHI Vestas Offshore Wind A/S, we have retroactively increased our 2019 baseline to account for the offshore business, while keeping existing carbon reduction targets in place for 2025 and 2030.

To achieve reductions in our own operations, we are continuing to source 100 percent of our own electricity from renewable sources. We are also electrifying our fleet of benefit cars (which is now 67 percent (PH)EVs) and have added 147 EVs or sustainably fuelled vehicles to our service fleet. We continue to modernise our factory heating systems and in 2021 transitioned two natural gas boilers to be powered by biomass. We have also begun investigating alternative fuels for our offshore service vessels.

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

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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)**

Scope 3

**Scope 2 accounting method**

<Not Applicable>

**Scope 3 category(ies)**

Category 1: Purchased goods and services

Category 2: Capital goods

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 12: End-of-life treatment of sold products

**Intensity metric**

Other, please specify (kg CO2e per MWh generated)

**Base year**

2019

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

6.82

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

6.82

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

<Not Applicable>

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

<Not Applicable>

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

70

**% of total base year emissions in all selected Scopes covered by this intensity figure**

70

**Target year**

2030

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

45

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

3.751

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

100

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

0

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

<Not Applicable>

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

6.65

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

6.65

**% of target achieved relative to base year [auto-calculated]**

5.53926360377973

**Target status in reporting year**

Underway

**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 target coverage and identify any exclusions**

The target covers 70% of the scope 3 emissions

**Plan for achieving target, and progress made to the end of the reporting year**

By 2030, we will reduce carbon emissions from our supply chain by 45 percent per MWh delivered to the market by:

- Supporting our strategic suppliers in developing strategies to measure and reduce their emissions
- Redesigning turbines with less carbon-intensive materials

We have chosen an intensity-based target because it incentivises sustainability partnerships with suppliers who reduce carbon emissions. It also allows for the continued growth of the

global renewable energy sector, which is a critical element of the global decarbonisation journey.

Accelerating the decarbonisation of the steel industry is perhaps our single greatest carbon reduction challenge. Making up between 80-90 percent of the material mass of a wind turbine, steel and iron production also comprise around 50 percent of our Scope 3 emissions.

While we are pushing to accelerate the decarbonisation of steel, further collaboration with the steel industry and increased incentives for green steel production will be critical to achieving our goals.

To help decarbonise steel production, we will:

- Incentivise the production of CO<sub>2</sub>-reduced steel in partnership with our steel suppliers
- Partner with suppliers in the creation and utilisation of green hydrogen and renewable electricity to help decarbonise steel production
- Invest in the development of alternative materials, such as wooden towers, to manufacture our turbines

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

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**C4.2**

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**(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**

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**(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: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Base year**

2018

**Consumption or production of selected energy carrier in base year (MWh)**

262283

**% share of low-carbon or renewable energy in base year**

68

**Target year**

2020

**% share of low-carbon or renewable energy in target year**

100

**% share of low-carbon or renewable energy in reporting year**

100

**% of target achieved relative to base year [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 target coverage and identify any exclusions**

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. In 2020, Vestas achieved 100% renewable electricity and this was maintained in 2021.

**Plan for achieving target, and progress made to the end of the reporting year**

<Not Applicable>

**List the actions which contributed most to achieving this target**

Purchasing of renewable energy certificates

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C4.2c

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**(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?**

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

**Please explain target coverage and identify any exclusions**

Vestas has signed up for the Business Ambition for 1.5°C Commitment

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Unsure

**Planned milestones and/or near-term investments for neutralization at target year**

<Not Applicable>

**Planned actions to mitigate emissions beyond your value chain (optional)**

**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	45	0
To be implemented*	2	2800
Implementation commenced*	2	400
Implemented*	27	3311
Not to be implemented	3	0

**C4.3b**

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

**Initiative category & Initiative type**

Low-carbon energy generation	Solid biofuels
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**Estimated annual CO2e savings (metric tonnes CO2e)**

396

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

34794

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

262582

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
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**Estimated annual CO2e savings (metric tonnes CO2e)**

74

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

14430

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

55000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment****Initiative category & Initiative type**

Energy efficiency in production processes	Cooling technology
---	--------------------

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

343

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

43800

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

15000

**Payback period**

&lt;1 year

**Estimated lifetime of the initiative**

1-2 years

**Comment****Initiative category & Initiative type**

Transportation	Company fleet vehicle replacement
----------------	-----------------------------------

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

493

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

1900

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

32500

**Payback period**

No payback

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Increased OPEX

**Initiative category & Initiative type**

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

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

1077

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

271000

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

217000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

3-5 years

**Comment**

**Initiative category & Initiative type**

Energy efficiency in production processes	Compressed air
---	----------------

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

58

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

11300

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

39100

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

**Initiative category & Initiative type**

Energy efficiency in production processes	Other, please specify (Insulation)
---	------------------------------------

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

33

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

14600

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

14800

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

**Initiative category & Initiative type**

Low-carbon energy consumption	Solar PV
-------------------------------	----------

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

23

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

1400

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

29400

**Payback period**

16-20 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative category & Initiative type**

Company policy or behavioral change	Resource efficiency
-------------------------------------	---------------------

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

812

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

156000

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

10000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

1-2 years

**Comment**

---

**Initiative category & Initiative type**

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

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

38

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

19700

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

10600

**Payback period**

<1 year

**Estimated lifetime of the initiative**

1-2 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?**

Yes

**C4.5a**

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Power	Onshore wind
-------	--------------

**Description of product(s) or service(s)**

More than 40 years experience, insights and knowledge of wind. Vestas wind turbines are checked and tested at our own test centres, after which the results are verified and certified by independent organisations. We also continuously monitor a large number of the turbines in operation, both to determine how the turbine design can be optimised and to use the data and knowledge to make turbine operation even more reliable and cost-effective. Vestas has an extensive portfolio of turbines which are each suited to specific conditions and requirements.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

<Not Applicable>

**Functional unit used**

<Not Applicable>

**Reference product/service or baseline scenario used**

<Not Applicable>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

<Not Applicable>

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

<Not Applicable>

**Explain your calculation of avoided emissions, including any assumptions**

<Not Applicable>

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

100

**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Power	Seabed fixed offshore wind turbine
-------	------------------------------------

**Description of product(s) or service(s)**

Since Tunø Knob in 1995, the industry's oldest commercial offshore installation still in operation, Vestas has been committed to harnessing the full potential of offshore wind. Continuously setting new standards with game-changing technologies to help drive down the cost of sustainable energy and meet the planet's future sustainable energy needs. As trusted partners in project engineering, installation, operations, service, and maintenance, we know what it takes to help our customers realise maximum offshore capability. With more than 25 years of experience we have a proven track record of +7 GW and +1,500 turbines installed across 45 projects, covering markets in

the UK, Netherlands, Belgium, Sweden, Denmark, and Germany - and our floating experiences in markets like Portugal and Scotland.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

<Not Applicable>

**Functional unit used**

<Not Applicable>

**Reference product/service or baseline scenario used**

<Not Applicable>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

<Not Applicable>

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

<Not Applicable>

**Explain your calculation of avoided emissions, including any assumptions**

<Not Applicable>

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

100

**C5. Emissions methodology**

**C5.1**

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

**C5.1a**

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

**Row 1**

**Has there been a structural change?**

Yes, other structural change, please specify (Both an acquisition and a divestment took place)

**Name of organization(s) acquired, divested from, or merged with**

In 2021, Vestas became 100% owner of Mitsubishi Vestas Offshore Wind and sold the Towers factory in Pueblo, USA. The 2019 baseline for target setting and the 2020 performance were therefore adjusted with these two companies. For 2021, Towers Pueblo was part of Vestas for six months and the CO2 emissions are subtracted from Vestas emissions. This is fully explained and documented in Vestas Annual Report 2021 on page 142.

**Details of structural change(s), including completion dates**

The acquisition of the 50% of Mitsubishi Vestas Offshore Wind to become 100% owner took place 14 December 2020.

The divestment of Towers Pueblo was completed 1 July 2021.

**C5.1b**

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	In 2021, Vestas became 100% owner of Mitsubishi Vestas Offshore Wind and sold the Towers factory in Pueblo, USA. The 2019 baseline for target setting and the 2020 performance were therefore adjusted with these two companies. For 2021, Towers Pueblo was part of Vestas for six months and the CO2 emissions are subtracted from Vestas emissions. This is fully explained and documented in Vestas Annual Report 2021 on page 142.

**C5.1c**



(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	In alignment with the GHG protocol standard, carbon emissions for 2019-2021 have retroactively been adjusted for acquisitions and divestments in 2020 and 2021 in accordance with our policy for baseline adjustments for the CO2e emissions and related indicators. Both acquisition and divestment had an impact of 10% or more.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

65978

Comment

Scope 2 (location-based)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

102982

Comment

Scope 2 (market-based)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

48199

Comment

Scope 3 category 1: Purchased goods and services

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

7033153

Comment

Scope 3 category 2: Capital goods

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

136979

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

29172

Comment

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

484056

**Comment**

**Scope 3 category 5: Waste generated in operations**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

12138

**Comment**

**Scope 3 category 6: Business travel**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

28580

**Comment**

**Scope 3 category 7: Employee commuting**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

43639

**Comment**

**Scope 3 category 8: Upstream leased assets**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

39247

**Comment**

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3 category 11: Use of sold products**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3 category 12: End of life treatment of sold products**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

12273

**Comment**

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3 category 15: Investments**

**Base year start**

January 1 2019

**Base year end**

December 31 2019

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

7000

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

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

**Comment**

Not relevant

**C5.3**

---

**(C5.3) 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**

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## 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)

99290

##### Start date

<Not Applicable>

##### End date

<Not Applicable>

##### Comment

In 2021, Vestas became 100% owner of Mitsubishi Vestas Offshore Wind and sold the Towers factory in Pueblo, USA. The 2019 baseline for target setting and the 2020 performance were therefore adjusted with these two companies. For 2021, Towers Pueblo was part of Vestas for six months and the CO2 emissions are subtracted from Vestas emissions. This is fully explained and documented in Vestas Annual Report 2021 on page 142.

---

## 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

78640

##### Scope 2, market-based (if applicable)

2673

##### 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

### Emissions in reporting year (metric tons CO2e)

9696099

### Emissions calculation methodology

Hybrid method

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

51

### Please explain

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.

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

### Emissions in reporting year (metric tons CO2e)

89653

### Emissions calculation methodology

Spend-based method

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

0

### Please explain

Estimated based on spend using DEFRA factors for Indirect emissions from the supply chain

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

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

26334

### Emissions calculation methodology

Fuel-based method

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

0

### Please explain

Energy consumption data received from suppliers.

Calculated based on fuel consumption and DEFRA 2021 WTT-fuels gross CV, Emission factor DEFRA (T&D 2016 + WTT generation 2021 + WTT T&D 2021) and emission factors for renewable electricity.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

640171

### Emissions calculation methodology

Hybrid method

### 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 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.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

13634

### Emissions calculation methodology

Spend-based method

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

0

### Please explain

Estimated using DEFRA factors for Indirect emissions from the supply chain

## Business travel

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

6844

### Emissions calculation methodology

Distance-based method

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

100

### Please explain

Data on business flights from Travel agent using GHG Protocol emission factors

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

67418

### Emissions calculation methodology

Distance-based method

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

0

### Please explain

Estimated using UK Government GHG Conversion Factors for Company Reporting 2021 and estimated transport commuting distance

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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

### Emissions in reporting year (metric tons 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

### Emissions in reporting year (metric tons 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

### Emissions in reporting year (metric tons 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

### Emissions in reporting year (metric tons CO2e)

23957

### Emissions calculation methodology

Average product method

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

0

### Please explain

CO2 emissions are estimated by assuming a MW quantity of wind turbines decommissioned in 2021. 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.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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

### Emissions in reporting year (metric tons 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

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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

No joint ventures

**Other (upstream)**

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons 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**

No other relevant (upstream)

**Other (downstream)**

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons 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**

No other relevant (downstream)

**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 <a href="https://www.vestas.com/en/sustainability/reports-and-ratings">https://www.vestas.com/en/sustainability/reports-and-ratings</a>

**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 <a href="https://www.vestas.com/en/sustainability/reports-and-ratings">https://www.vestas.com/en/sustainability/reports-and-ratings</a>

**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	14902	

**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**

0.0000065

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

101963

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

15587000000

**Scope 2 figure used**

Market-based

**% change from previous year**

0.6

**Direction of change**

Increased

**Reason for change**

$0.000000036/0.00000651*100$

In 2021, Vestas became 100% owner of Mitsubishi Vestas Offshore Wind and sold the Towers factory in Pueblo, USA. The 2019 baseline for target setting and the 2020 performance were therefore adjusted with these two companies. For 2021, Towers Pueblo was part of Vestas for six months and the CO2 emissions are subtracted from Vestas emissions. This is fully explained and documented in Vestas Annual Report 2021 on page 142.

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## C7. Emissions breakdowns

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### C7.1

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(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

No

### C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Denmark	4313
Australia	1727
Austria	372
Brazil	959
Bulgaria	109
Canada	1335
Chile	602
China	4382
Finland	334
France	2256
Germany	11656
Greece	654
India	1133
Ireland	289
Italy	1505
Japan	82
Kenya	4
Republic of Korea	27
Mexico	822
Netherlands	5807
New Zealand	97
Philippines	14
Poland	1393
Portugal	529
Romania	572
South Africa	317
Spain	3655
Sweden	1289
Taiwan, China	76
Turkey	628
United States of America	21366
United Kingdom of Great Britain and Northern Ireland	22697
Ukraine	169
Jordan	343
Norway	698
Peru	79
Uruguay	290
Morocco	77
Senegal	171
Argentina	121
Russian Federation	403
Mongolia	23
Thailand	104
Viet Nam	92
Belgium	5285
Saudi Arabia	436

**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	16334
APAC	3659
AGT	2568
Blades	10287
CON	964
Group	1320
MED	11755
NCE	51536
Service	473
VPS	394

**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	14998	45.508704	-122.560581
APAC Taiwan	76	25.085755	121.561474
APAC Australia	1727	-37.828819	144.971207
APAC India	852	13.05939	80.24567
APAC Japan	82	35.620504	139.739731
APAC South Korea	27	37.557121	126.977375
APAC New Zealand	97	-40.357419	175.611475
Blades Brighton	2207	39.977154	-104.746774
Blades Daimiel	1161	39.069505	-3.617359
Blades Lauchhammer	337	51.474023	13.778967
Blades Lem	154	56.022361	8.387852
Blades Taranto	504	40.456833	17.258516
Blades Tianjin	2297	39.252134	117.161098
Blades Windsor	3539	40.461449	-104.848091
NCE Austria	372	48.213241	16.417216
NCE Germany	5975	53.597689	9.976442
NCE Netherlands	686	51.953244	5.873535
APAC China	565	39.920885	116.333599
Controls Hammel	508	56.241447	9.866301
Controls Tianjin	456	39.252134	117.161098
Group Staff Denmark	1168	56.196363	10.177488
MED Brazil	959	-14.242916	-51.412289
MED France	2256	48.175431	-2.754229
MED Greece	654	38.032835	23.81424
MED Italy	1002	40.45976	17.38497
MED Mexico	822	19.422447	-99.209758
MED Portugal	508	40.04634	-7.950804
MED Spain	2487	40.505078	-3.639038
MED Turkey	628	41.019341	28.95294
Assembly Tianjin	903	39.252134	117.161098
Assembly Brighton	621	39.977154	-104.746774
Assembly Chennai	149	13.06397	80.24311
Generators Tianjin	160	39.252134	117.161098
Repair Generator Lübeck	247	53.888326	10.705765
Assembly Ringkøbing	584	56.089233	8.2718
Generators Viveiro	7	43.580862	-7.558549
NCE Denmark	1180	56.091894	8.642899
NCE Ireland	289	53.35842	-6.241424
NCE Poland	1393	53.429035	14.556745
NCE Sweden	1289	55.548932	12.988119
NCE United Kingdom	881	53.424599	-2.52208
Warehouse NEU Randers	226	56.425408	10.045728
VPS United Kingdom	369	50.7001	-1.295939
VPS Denmark	1	56.196363	10.177488
Generators Travemünde	15	53.934893	10.845711
Manufacturing HQ	151	56.196363	10.177488
AME Canada	1335	45.508704	-122.560581
APAC Philippines	14	14.560725	121.016469
NCE Bulgaria	109	43.219576	27.915707
NCE Romania	572	44.429997	26.12921

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
NCE Ukraine	169	43.219576	27.915707
VPS India	3	12.86138	80.226668
Blades Ahmedabad	129	22.841912	72.370252
NCE Kenya	4	3.487274	35.354224
NCE South Africa	317	-28.786638	24.753048
MED Chile	602	-30.20736	-71.639169
NCE Finland	334	64.198342	26.28978
MED Jordan	343	31.260381	34.878476
MED Peru	79	-9.468801	-77.265701
MED Uruguay	290	32.5228	55.7658
NCE Norway	698	59.90596	10.71431
VPS Portugal	21	40.04634	-7.950804
MED Senegal	171	14.4974	14.4524
MED Morocco	77	31.7917	7.0926
MED Argentina	121	38.4161	63.6167
Blades Ulyanovsk	88	54.3187	48.3978
Assembly Fortaleza	0	3.7327	38.527
APAC Mongolia	23	43.5708	89.962
APAC Thailand	104	5.7743	97.968
APAC Vietnam	92	14.0583	108.277
Philippines	0	6.7525	124.801
Assembly Lindø	40	55.413	10.403
Blades Fawley	998	50.827	-1.35
Blades Isle of Wight	550	50.701	-1.291
Blades Nakskov	130	54.834	11.14
NCE Russia	314	56.26016	42.518815
Controls Esbjerg	29	55.494	8.466
MED Saudi Arabia	436	24.619	46.619
OFS Belgium Service	5285	50.5039	4.4699
OFS Denmark Construction	142	55.494	8.466
OFS Germany Service	5082	53.597	9.976
OFS Netherlands Service	5120	51.953	5.873
OFS UK Construction	14082	50.701	-1.291
OFS UK Service	5816	50.701	-1.291

## 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)
Australia	136	0
Austria	33	6
Brazil	83	0
Bulgaria	22	0
Chile	14	14
China	24123	0
Denmark	5219	1190
Germany	8315	912
Greece	100	0
India	8962	0
Italy	10111	0
Japan	27	27
Mexico	64	0
Netherlands	81	0
Poland	49	0
Portugal	112	0
Romania	48	0
South Africa	0	0
Spain	4942	0
Sweden	5	0
Taiwan, China	16	16
Turkey	66	0
United Kingdom of Great Britain and Northern Ireland	1571	0
United States of America	12239	0
Uruguay	0.2	0.2
France	19	0
Morocco	0	0
Senegal	0	0
Argentina	9	9
Canada	0	0
Finland	0.1	0.1
Jordan	0	0
Kenya	0	0
Republic of Korea	0	0
New Zealand	0	0
Norway	0	0
Peru	0	0
Philippines	74	0
Russian Federation	2195	483
Ukraine	1	1
Belgium	24	0
Ireland	0	0
Mongolia	0	0
Saudi Arabia	0	0
Thailand	0	0
Viet Nam	15	15

**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	479	0
APAC	1513	58
AGT	16009	320
Blades	50354	1771
NCE	3374	464
CON	2881	18
MED	431	23
Service	713	0
VPS	2678	0
Group	208	20

C7.6b

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**(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	479	0
APAC Taiwan	16	16
APAC India	825	0
APAC Japan	27	27
Blades Lauchhammer	6448	861
Blades Lem	1381	428
Blades Tianjin	15295	0
NCE Austria	10	6
NCE Germany	323	51
NCE Netherlands	55	0
APAC China	494	0
Controls Tianjin	2518	0
MED Greece	100	0
MED Italy	56	0
MED Mexico	64	0
MED Spain	88	0
MED Turkey	66	0
Assembly Tianjin	2272	0
Assembly Chennai	1475	0
Generators Tianjin	3545	0
Assembly Ringkøbing	524	320
Assembly Fortaleza	83	0
Assembly Lindø	529	156
NCE Bulgaria	22	0
NCE Romania	48	0
VPS India	1071	0
Blades Ahmedabad	5591	0
Blades Isle of Wight	753	0
MED Chile	14	14
MED France	19	0
Blades Nakskov	671	0
Group Staff Denmark	134	20
APAC Australia	136	0
Controls Esbjerg	22	0
OFS Belgium Service	24	0
Assembly Brighton	1430	0
Blades Brighton	3898	0
Blades Daimiel	4650	0
Blades Taranto	10055	0
Blades Ulyanovsk	2195	428
Blades Windsor	6433	0
OFS Denmark Construction	119	45
NCE Ukraine	1	1
Controls Hammel	363	18
Generators Travemünde	886	0
Generators Viveiro	203	0
OFS Netherlands Service	25	0
MED Argentina	9	9
OFS UK Construction	121	0
MED Morocco	0	0
MED Portugal	15	0
MED Uruguay	0.2	0.2
NCE Denmark	478	204
NCE Finland	0.1	0.1
NCE Poland	49	0
NCE Sweden	5	0
NCE United Kingdom	118	0
VPS Denmark	945	0
VPS Portugal	97	0
VPS United Kingdom	565	0
Warehouse NEU Randers	55	0
Philippines	74	0
Repair Generator Lübeck	658	0
APAC Vietnam	15	0

**(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?**

Increased

**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	912	Decreased	1	Switch from natural gas to biomass. Switch to renewable fuelled vehicles. $912/96,408 \times 100 = 1\%$
Other emissions reduction activities	2399	Decreased	2.5	Energy efficiency activities $2,399/96,408 \times 100 = 2.5\%$
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	16000	Increased	9	Increased offshore activity with increase in fossil fuel for vessels. $8,863/96,408 \times 100 = 9\%$
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?**

Remained the same overall

**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**

No change

**Primary reason for change**

<Not Applicable>

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

<Not Applicable>

**% change in emissions in this category**

<Not Applicable>

**Please explain**

Approximately same amount of product manufactured

**Capital goods**

**Direction of change**

Increased

**Primary reason for change**

Change in output

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

19000

**% change in emissions in this category**

27

**Please explain**

Investing in equipment for new product range



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

**Direction of change**

Increased

**Primary reason for change**

Change in output

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

8000

**% change in emissions in this category**

45

**Please explain**

Increased offshore activity with increase in fossil fuel for vessels.

**Upstream transportation and distribution**

**Direction of change**

No change

**Primary reason for change**

<Not Applicable>

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

<Not Applicable>

**% change in emissions in this category**

<Not Applicable>

**Please explain**

Approximately same amount of product manufactured and shipped

**Waste generated in operations**

**Direction of change**

Decreased

**Primary reason for change**

Change in material efficiency

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

1500

**% change in emissions in this category**

10

**Please explain**

Material efficiency increased. Less waste generated.

**Business travel**

**Direction of change**

Decreased

**Primary reason for change**

Other emissions reduction activities

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

8500

**% change in emissions in this category**

55

**Please explain**

Online meetings prioritized

**Employee commuting**

**Direction of change**

Increased

**Primary reason for change**

Other, please specify (more employees)

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

3000

**% change in emissions in this category**

5

**Please explain**

more employees

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

Increased

**Primary reason for change**

Change in methodology

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

20000

**% change in emissions in this category**

532

**Please explain**

Error in 2020 calculation

**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	Yes

**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)	HHV (higher heating value)	8386	438825	447211
Consumption of purchased or acquired electricity	<Not Applicable>	232577	188	232765
Consumption of purchased or acquired heat	<Not Applicable>	42441	15178	57619
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>	23	<Not Applicable>	23
Total energy consumption	<Not Applicable>	283427	454191	737618

**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.**

**Sustainable biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**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>

**Comment**

**Other biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**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>

**Comment**

**Other renewable fuels (e.g. renewable hydrogen)**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

8385

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

843

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

7542

**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>

**Comment**

843 MWh biodiesel for electricity generators

1,315 MWh biogas for heating

6,227 MWh biofuel for transport

**Coal**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**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>

**Comment**

**Oil**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

1206

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

0

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

1206

**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>

**Comment**

**Gas**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

93332

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

0

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

93332

**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>

**Comment**

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

344289

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

17096

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

327193

**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>

**Comment**

17,096 diesel for generators for electricity  
 139,000 MWh marine gas oil for transport  
 188,193 MWh diesel, gasoline and LPG for transport

**Total fuel**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

447211

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

17939

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

429272

**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>

**Comment**

**C8.2d**

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	17962	17962	23	23
Heat	95852	95852	1315	1315
Steam	0	0	0	0
Cooling	0	0	0	0

**C8.2e**

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

**Sourcing method**

Please select

**Energy carrier**

<Not Applicable>

**Low-carbon technology type**

<Not Applicable>

**Country/area of low-carbon energy consumption**

<Not Applicable>

**Tracking instrument used**

<Not Applicable>

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

<Not Applicable>

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

<Not Applicable>

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

<Not Applicable>

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Large hydropower (>25 MW)

**Country/area of low-carbon energy consumption**

Germany

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

21378

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Norway

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Solar

**Country/area of low-carbon energy consumption**

Italy

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

35341

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Italy

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

**Country/area of low-carbon energy consumption**

Spain

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

24807

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Spain

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Belgium

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

144

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2020

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

**Country/area of low-carbon energy consumption**

United Kingdom of Great Britain and Northern Ireland

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

7465

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United Kingdom of Great Britain and Northern Ireland

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

31881

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

United States of America

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

11336

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

---

Canada

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2012

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

China

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

38553

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

China

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2016

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Small hydropower (<25 MW)

**Country/area of low-carbon energy consumption**

India

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

12342

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

India

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2012

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Romania

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

140

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2020

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

---



**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Brazil

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

798

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Brazil

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2015

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Solar

**Country/area of low-carbon energy consumption**

Russian Federation

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

4567

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Russian Federation

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)****Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Mexico

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

161

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Mexico

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2015

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Portugal

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

410

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2020

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

**Country/area of low-carbon energy consumption**

Portugal

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

63

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Portugal

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Sweden

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

361

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Sweden

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Geothermal

**Country/area of low-carbon energy consumption**

Philippines

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

110

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Philippines

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

1979

**Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Turkey

**Tracking instrument used**

I-REC

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

154

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Turkey

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2017

**Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

**Country/area of low-carbon energy consumption**

France

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

348

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

France

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)****Comment**

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Australia

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

198

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Australia

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)****Comment**

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Greece

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

202

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2020

Comment

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Netherlands

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

219

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2020

Comment

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

**Country/area of low-carbon energy consumption**

Poland

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

73

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Poland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

---

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

Bulgaria

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

51

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Denmark

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

2020

Comment

---

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (Mix unknown)

---

**Country/area of low-carbon energy consumption**

Austria

**Tracking instrument used**

Contract

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

24

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Austria

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

---

**C8.2g**

---

**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**

Argentina

**Consumption of electricity (MWh)**

30

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

30

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Australia

**Consumption of electricity (MWh)**

198

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

198

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Austria

**Consumption of electricity (MWh)**

24

**Consumption of heat, steam, and cooling (MWh)**

38

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

62

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Belgium

**Consumption of electricity (MWh)**

144

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

144

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Brazil

**Consumption of electricity (MWh)**

798

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

798

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Bulgaria

**Consumption of electricity (MWh)**

51

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

51

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Chile

**Consumption of electricity (MWh)**

32

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

32

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

China

**Consumption of electricity (MWh)**

38553

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

38553

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Denmark

**Consumption of electricity (MWh)**

41453

**Consumption of heat, steam, and cooling (MWh)**

38280

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

79733

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Finland

**Consumption of electricity (MWh)**

1

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

1

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

---

France

**Consumption of electricity (MWh)**

348

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

348

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Germany

**Consumption of electricity (MWh)**

21378

**Consumption of heat, steam, and cooling (MWh)**

14702

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

36080

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Greece

**Consumption of electricity (MWh)**

202

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

202

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

India

**Consumption of electricity (MWh)**

12365

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

12365

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Italy

**Consumption of electricity (MWh)**

35341

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

35341

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Japan

**Consumption of electricity (MWh)**

54

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

54

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

---

**Country/area**

Mexico

**Consumption of electricity (MWh)**

161

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

161

**Is this consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

---

**Country/area**

Netherlands

**Consumption of electricity (MWh)**

219

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

219

**Is this consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

---

**Country/area**

Philippines

**Consumption of electricity (MWh)**

110

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

110

**Is this consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

---

**Country/area**

Poland

**Consumption of electricity (MWh)**

73

**Consumption of heat, steam, and cooling (MWh)**

88

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

161

**Is this consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

---

**Country/area**

Portugal

**Consumption of electricity (MWh)**

473

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

473

**Is this consumption excluded from your RE100 commitment?**

&lt;Not Applicable&gt;

---

**Country/area**

Romania

**Consumption of electricity (MWh)**

140

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

140



Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Russian Federation

**Consumption of electricity (MWh)**

4567

**Consumption of heat, steam, and cooling (MWh)**

2827

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

7394

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Spain

**Consumption of electricity (MWh)**

24807

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

24807

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Sweden

**Consumption of electricity (MWh)**

361

**Consumption of heat, steam, and cooling (MWh)**

262

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

623

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Taiwan, China

**Consumption of electricity (MWh)**

29

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

29

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Turkey

**Consumption of electricity (MWh)**

154

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

154

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

---

**Country/area**

Ukraine

**Consumption of electricity (MWh)**

4

**Consumption of heat, steam, and cooling (MWh)**

0

---

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

4

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

United Kingdom of Great Britain and Northern Ireland

**Consumption of electricity (MWh)**

7465

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

7465

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

United States of America

**Consumption of electricity (MWh)**

43216

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

43216

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Uruguay

**Consumption of electricity (MWh)**

14

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

14

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Viet Nam

**Consumption of electricity (MWh)**

23

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

23

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

### 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**

84

**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**

84

**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.**

**Description**

Please select

**Metric value**

**Metric numerator**

**Metric denominator (intensity metric only)**

**% change from previous year**

**Direction of change**

<Not Applicable>

**Please explain**

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**

Large scale commercial deployment

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

81 - 100%

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

364000000

**Comment**

Research and development costs recognised in the income statement amounted to EUR 364m, significantly higher than the 2020 level of EUR 265m. The total research and development expenditure prior to capitalisation and amortisation increased from EUR 331m in 2020 to EUR 444m in 2021. The increase was mainly attributable to the inclusion of the offshore business and to research and development activities as part of bringing new Onshore and Offshore 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**

Vestas - CDP-verification 2021.pdf

**Page/ section reference**

1-5

**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**

Vestas - CDP-verification 2021.pdf

**Page/ section reference**

1-5

**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: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: End-of-life treatment of sold products

**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**

Vestas - CDP-verification 2021.pdf

**Page/section reference**

1-5

**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
C4. Targets and performance	Financial or other base year data points used to set a science-based target	ISAE3000	Independent assurance report on the Sustainability key figures 2021, Annual Report 2021 page 135 220210 annual-report-2021.pdf
C8. Energy	Energy consumption	ISAE3000	Independent assurance report on the Sustainability key figures 2021, Annual Report 2021 page 135 220210 annual-report-2021.pdf

## C11. Carbon pricing

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### 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 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

37101

**Comment**

#### Denmark carbon tax

**Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

103527

**Comment**

#### Finland carbon tax

**Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

23380

**Comment**

**France carbon tax****Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

112800

**Comment****Ireland carbon tax****Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

8381

**Comment****Portugal carbon tax****Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

14283

**Comment****Sweden carbon tax****Period start date**

January 1 2021

**Period end date**

December 31 2021

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

100

**Total cost of tax paid**

150903

**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?**

Yes

**C11.3a**

---

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

**Objective for implementing an internal carbon price**

Change internal behavior  
Identify and seize low-carbon opportunities

**GHG Scope**

Scope 3

**Application**

Used in supply chain planning of where in the world to source turbine components based on estimated CO2 emissions from transportation to installation site.

**Actual price(s) used (Currency /metric ton)**

120

**Variance of price(s) used**

**Type of internal carbon price**

Shadow price

**Impact & implication**

Driving supply chain decisions with lower CO2 emissions from transportation.

---

**C12. Engagement**

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**C12.1**

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**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers  
Yes, our customers/clients

**C12.1a**

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

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Other, please specify (Suppliers are scored on their sustainability efforts and are requested, through regular dialogues, to ensure continuous improvement. )

**% of suppliers by number**

1.5

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

62

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

**Rationale for the coverage of your engagement**

The rationale for supplier selection for this engagement is based on Vestas' Supplier Segmentation Framework. Vestas segments all suppliers into A, B, C, and D suppliers using a structured approach to bring an appropriate level of focus and resources dedicated to each segment. The suppliers are segmented based on criteria such as technology & innovation, investment capacity, current and forecasted spend, competitiveness, quality, sustainability maturity etc. The segmentation is done by the Category Management Teams who identify the most important/critical suppliers to Vestas. The segmentation determines the level of engagement for each segment, where A suppliers have the highest level of engagement across all parameters.

The Supplier Scorecard is the foundation for a continuous performance dialogue between Vestas and the supplier and therefore the most critical supplier, i.e. A, B, and some C suppliers are in scope. That means that out of our full supply base, we are scoring approx. 150 of our key suppliers with regards to safety, compliance & sustainability to make sustainability an integrated part of their performance evaluations and to be able to track the sustainability performance development.

In the Safety & Sustainability (S&S) assessment suppliers are asked to report on their sustainability maturity levels and are rated based on their performance within the areas; safety, environmental- and social sustainability performance. This includes, but are not limited to, questions about whether suppliers track and measure CO2 emissions and set reduction targets for their own activities, whether they measure and have set target for their scope 3 emissions, and if they are committed to science-based targets to reduce CO2 emissions. Aside from this, we also collect information on our suppliers related to the use of renewable energy, waste reduction efforts, and circularity of supplied products to Vestas.

**Impact of engagement, including measures of success**

Vestas distributes Supplier Performance Scorecards to approx. 150 of its key suppliers. The scorecard performance across these suppliers is an official KPI for the Global Procurement department in Vestas. Safety & Sustainability weighs 30% of the total "Supplier Performance Scorecard KPI" which contains the parameters; Safety & Sustainability, Quality, Delivery and Value (containing: Cost, Risk, Innovation, and Collaboration).

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Our S&S Scorecard allows us to measure the maturity of suppliers in health & safety, environmental, and social sustainability on a regular basis. By the end of 2021, we achieved an average score of 84% across all strategic suppliers, exceeding our target average score of 80%. We saw 60% (out of approx. 150) of our strategic suppliers improve their sustainability scorecards over just nine months, while 37% and 4% of the strategic suppliers maintained and declined in score, respectively. We believe that continuous Sustainability assessment allows us to drive our suppliers toward a sustainable direction. A 2021 score above target combined with an overweight of suppliers that have improved their score, we evaluate as a measure of success. We conduct performance dialogues with all suppliers; with low-performing suppliers from any segment, the dialogues aim to follow up on performance and actions plans (both short- and long-term) until Vestas' standards are met.

A specific example is a supplier engagement that was initiated after the supplier got a low score of 76% in the S&S assessment. Vestas continuously engaged with the supplier to ensure they have met Vestas' requirements. The supplier was able to establish a GHG management system and monitor its GHG inventory based on international standards. Not only has the supplier achieved a new record in the Safety & Sustainability assessment (score of 96%), but it has also acquired an ISO 50001 Energy Certificate certification, GHG Verification Report and certificate, and launched its first ESG report in 2022. Looking forward, the supplier will continue to promote the management of greenhouse gas emissions to achieve the goals of resource efficiency, energy conservation, and environmental protection.

#### Comment

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#### Type of engagement

Engagement & incentivization (changing supplier behavior)

#### Details of engagement

Run an engagement campaign to educate suppliers about climate change  
Other, please specify (We require suppliers to commit to sustainability targets listed below.)

#### % of suppliers by number

0.5

#### % total procurement spend (direct and indirect)

50

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

#### Rationale for the coverage of your engagement

Vestas has set ambitious environmental sustainability goals to reduce carbon emissions in the supply chain by 45% per MWh generated by 2030 and to produce zero-waste turbines by 2040. We are working closely with our suppliers to share expertise, set clear expectations for increasing sustainability performance, and secure commitments across the industry.

Our engagement with suppliers is mainly based on our supplier segmentation framework. Vestas segments all suppliers using a structured approach to bring an appropriate level of focus and resources dedicated to each segment. The suppliers are segmented based on technology & innovation, investment capacity, current and forecasted spend, competitiveness, quality, sustainability, and other factors related to the commodity and supplier commitment. The suppliers that we engage with, with regard to sustainability expectations and collaboration are therefore the suppliers we estimate are most critical for Vestas today and, importantly, in the future. These suppliers have strategic sustainability potential and performance, as well as having the technology and innovative resources to enable Vestas to achieve its ambitious sustainability goals. So, engaging with these strategic suppliers will have a substantial impact on Vestas' emission goals for the supply chain. Currently, we have successfully engaged 50 strategic suppliers (making up more than 50% of our total material spend) to join our sustainability journey in a circular economy and reduce their carbon footprint.

#### Impact of engagement, including measures of success

Vestas has ambitious sustainability goals to reduce 45% of scope 3 emissions by 2030 and a 50% reduction in waste intensity for products delivered to Vestas by 2030. Part of our strategic initiatives to achieve these goals is our expectations for suppliers to commit to measuring and setting reduction targets for their carbon emissions and waste. From 2020, our supplier engagement increased from 10 to 50 strategic suppliers to commit to our reduction targets, covering about half of our material spend.

More than 99% of our total carbon footprint comes from our supplier's operations, hence we are determined to work collaboratively with our suppliers to reduce emissions. To date, 88% of the 50 strategic suppliers have committed to our CO2 reduction targets. While strategic suppliers in sustainability hotspot areas (identified to be Towers & Steel, Transport, and Blades, which cover approx. 70% of Vestas' scope 3 emissions) have an average commitment rate of 93% in reducing their carbon emissions.

In early 2022, we started partnering with our 50 strategic suppliers to commit to reducing 50% supply chain waste intensity by 2040. To date, our engagement has garnered 55% of strategic suppliers to contribute to Vestas' road to circularity. We actively continue to engage with suppliers who have not yet committed, as well as engaging with new suppliers. As part of measuring our success at end of 2021, we received production waste data from 15 of our strategic suppliers for the very first time. We aim by the end of 2022 for these strategic suppliers to set interim targets for their own operations; and by the end of 2024, to calculate and set waste reduction targets for their own suppliers. These measures are set to initiate a cascade of waste reductions through our value chain.

We are in the process of securing validation of sustainability data from key suppliers in the sustainability hotspot areas. One of our expected outcomes this year is the implementation of new a platform that will support and enhance our engagement with strategic suppliers. The platform will enable reliability and transparency of data collected and will reduce manual calculations. Digitalization of sustainability data will enable us to achieve our sustainability targets by creating transparency in the supply chain and improving the progress on the decarbonization of the supply chain.

#### Comment

Vestas Sustainability Strategy, "Sustainability in Everything We do" is an integrated part of Vestas' Supply Chain Strategy. Our ambitious environmental sustainability goals are our commitment to reduce carbon emissions in the supply chain by 45% per MWh generated by 2030 and produce zero-waste turbines by 2040. To achieve this, we have set out expectations for our key suppliers to commit to reducing their carbon footprint: (1) Calculating and reporting CO2 emissions for products delivered to Vestas. (2) Calculating and setting targets for scope 3 emissions. And contribute to Vestas goal of producing zero-waste turbines by 2040: (1) Suppliers have committed to start measuring and reporting on the production of waste. (2) Supplier commits to a 50% reduction in waste from products delivered to Vestas by 2030. (3) Set targets for own operations' waste reduction by 2030 (4) Supplier commits to calculate and set targets for Tier 1 suppliers' waste reduction.

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#### 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

0.49

#### % total procurement spend (direct and indirect)

46

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

### Rationale for the coverage of your engagement

The rationale for suppliers engaged in our Supplier Forums is based on Vestas' Segmentation Framework. The suppliers are segmented based on technology & innovation, investment capacity, current and forecasted spend, competitiveness, quality, sustainability, and other factors related to the commodity and supplier commitment. We define A and B suppliers, as Strategic Alliances and Business Partners, respectively. These suppliers have the strategic potential and performance to help Vestas achieve its ambitious sustainability goals.

On November 29, 2021, our annual Supplier Forum event took place, virtually. The theme of the forum was creating a "Sustainable Supply Base". A total of 46 suppliers were invited which comprised of both A & B suppliers. Vestas Supplier Forum is about building stronger relations and engaging with our key suppliers. The Forum creates a platform for key decision-makers at Vestas and our strategic suppliers to connect and share business perspectives and expectations with each other. Furthermore, the forum serves as a platform to listen, show tangible examples, and lay the ground for our key suppliers to become true partners. It will also enable us to reach our vision of being the global leader in sustainable energy solutions.

During the Forum, to further enhance our engagement and build capacity, a series of breakout sessions were conducted, two of which focused on carbon reduction and circularity. The aim of the breakout sessions was to have a focused group discussion involving climate-related topics. In the break-out sessions, Vestas first elaborated upon the commitment of reducing CO2 emissions in supply chain by 45% per MWh generated by 2030 and producing zero wastes wind turbine by 2040 and how the suppliers could support us on that journey. Next, we engaged the suppliers in discussions covering:

Current initiatives suppliers are doing to reduce their emissions and enhance circularity, and the Biggest challenges and opportunities for carbon reduction and circularity. At the Forum, Vestas also rewards the most sustainable supplier. The criteria for selecting the supplier were commitment to renewable energy transition, carbon emission reduction, circularity, resource efficiency, drive for innovation, certification, and more.

### Impact of engagement, including measures of success

Our target was to have 100% participation for both A & B suppliers, which was met during the forum.

Success was also measured through suppliers' participation in our annual Supplier Sustainability Award. The supplier who won the Sustainability award won due to the following:

- (1) Focus on transferring from fossil to renewable energy in the production,
- (2) Using the circular economy strategy in production design to reduce consumption and waste,
- (3) Drive and inspire the sustainable development of the wind industry supply chain via a network composed of companies with shared values,
- (4) New foundry in India to reach the highest environmental certification level within the Indian Green Building Council – the IGBC Platinum Green rating

This exemplifies shows that the impact of Supplier Engagement/Forum fosters innovation, collaboration, and improvement in the suppliers' own organization.

### Comment

The result of the Supplier Forum created awareness about the expectations we have to our suppliers in creating a sustainable supply base. In addition, the supplier feedback from the Forum shows that suppliers are enthusiastic and willing to align with Vestas' sustainability strategy.

## C12.1b

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

#### Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts
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#### % of customers by number

100

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

#### 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 customers 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. All in all the impact of our customer engagement and support have over the years resulted in more than 1.7 billion tons of CO2e being avoided - 210 million tons alone in 2021.

#### 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.

## C12.2

### (C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

## C12.2a

**(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

**Climate-related requirement**

Complying with regulatory requirements

**Description of this climate related requirement**

Response: The coverage of our engagement with our suppliers is based on the onboarding process that we conduct to all our existing and potential suppliers. Vestas uses the SAP Ariba Platform which consists of four consecutive phases to complete the supplier qualification process: (1) Supplier registration, (2) Compliance assessment covering the Supplier code of conduct, legal compliance, and human rights, (3) Supplier self-evaluation, (4) and on-site assessment as per vestas' defined questionnaire covering quality systems, EHS management systems, sustainability, special processes, and compliance. The process ends with the following scenarios: Assessment score  $\geq 70\%$  in all chapters. Supplier is approved and granted certification with Vestas. Assessment score  $>50-69\%$ . Supplier is not approved and undergoes resolution projects. The performance of the projects committed by Vestas and the supplier shall be tracked. No supplier can be approved before all requirements have been met. Assessment score  $<50\%$ . Suppliers are disqualified and onboarding will stop. After approval, suppliers shall maintain and continually improve its development. Approved suppliers are subject to suspension whenever a decline on this obligation is manifested, e.g. severe deviation, inconsistent performance, or failed re-assessment. Audits/inspections may be performed by Vestas or a Vestas 3rd party representative under an appropriate duty of confidentiality agreement.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

100

**% suppliers by procurement spend in compliance with this climate-related requirement**

100

**Mechanisms for monitoring compliance with this climate-related requirement**

Certification  
Supplier self-assessment  
Off-site third-party verification  
On-site third-party verification

**Response to supplier non-compliance with this climate-related requirement**

Exclude

**Climate-related requirement**

Other, please specify (We have selected applicable requirements: Implementation of emissions reduction initiatives, purchasing renewable energy, setting a low-carbon energy target, setting a renewable energy target, and waste reduction and material circularity )

**Description of this climate related requirement**

Suppliers must adhere to and support Vestas' environmental requirements and responsibilities. We prioritize compliance in this area through assessments for all existing and new suppliers, ranging from supplier scorecards, self-evaluation, and on-site assessments as per Vestas' defined questionnaire covering EHS management systems, and sustainability. Our onboarding process requires suppliers to comply with Vestas' Supplier Code of Conduct and if an assessment score of  $\geq 70\%$  in all chapters is achieved. Suppliers are segmented using a structured approach to bring an appropriate level of focus, resources, and implications dedicated to each group. The highest priority group of suppliers is strategic suppliers, defined as having the most potential and performance to help Vestas achieve its ambitious sustainability goals. Expectations for strategic suppliers, through our segmentation model, set our collaborative commitments with strategic suppliers to achieve Vestas' sustainability targets. We engage with the group of strategic suppliers to commit to 100% renewable energy consumption, measure and set reduction targets on carbon emissions and produced waste. In early 2022, strategic suppliers have started to commit to waste reduction targets delivered to Vestas and set targets for Tier 1 suppliers' waste reduction. Vestas will continue to ensure that Vestas' strategic suppliers shall be able to demonstrate their commitment and ability to support Vestas' environmental commitments.

**% suppliers by procurement spend that have to comply with this climate-related requirement**

45

**% suppliers by procurement spend in compliance with this climate-related requirement**

37

**Mechanisms for monitoring compliance with this climate-related requirement**

Certification  
Supplier self-assessment  
Off-site third-party verification  
On-site third-party verification  
Grievance mechanism/Whistleblowing hotline  
Supplier scorecard or rating

**Response to supplier non-compliance with this climate-related requirement**

Retain and engage

C12.3

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

**Row 1**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers  
Yes, we engage indirectly through trade associations  
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

Vestas - Our Policy recommendations.PNG  
Vestas - Our Policy recommendations - Climate change.PNG  
Vestas - Our Policy recommendations - Sustainable Energy Transition.PNG  
Vestas - Our Policy recommendations - From cost to value.PNG  
About Vestas - Solutions for a sustainable energy system.PNG

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

Attachments are screenshots from our website (<https://www.vestas.com/en/about/this-is-vestas/who-we-are> and <https://www.vestas.com/en/about/Our-policy-recommendations/overview>).  
Vestas being a pureplay renewable energy manufacturer, it is in our business interest to only conduct engagement activities that are accelerating the clean energy transition in order to limit global warming to 1.5 degree C over pre-industrial times. Any engagement we have focusses thus on accelerating the clean energy transition, to increase the build-out of renewables and related infrastructure, to accelerate renewable direct electrification and to invest into indirect electrification to have the foundations to cover the last "mile" of the energy transition (=decarbonization of hard-to-electrify sectors).

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**C12.3a**

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

**Focus of policy, law, or regulation that may impact the climate**

Climate-related targets  
Renewable energy generation

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

National Determined Contributions (increase ambitions to limit global warming to 1.5 degrees C)

**Policy, law, or regulation geographic coverage**

Global

**Country/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with major exceptions

**Description of engagement with policy makers**

Engagement mainly through our association memberships and through event participation and media communication to call upon governments around the world to align national commitments with limiting limit global warming to 1.5 degrees C and to fast-track the clean energy transition with wind energy as part of the solutions

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

As per <https://climateactiontracker.org/> no major carbon emitting country is having Nationally Determined Contributions (NDCs) that are compatible with limiting global warming to 1.5 degrees C. We support thus the establishment of NDCs but constantly push to increase climate mitigation commitments and to turn commitments into action. With COVID-19 restrictions having limited physical events around the world, we also employed digital means to spread our messaging, like for example op-eds (COP26 sharpened the talk, COP27 must measure the action available here: <https://www.ft.com/partnercontent/vestas/cop26-sharpened-the-talk-cop27-must-measure-the-action.html>), tweets (<https://twitter.com/Vestas/status/1455527695178248215>) or CEO letters calling for action (<https://gwec.net/an-open-letter-from-the-wind-energy-industry-to-g20-and-world-leaders-its-time-to-get-serious-about-renewables/> and <https://www.weforum.org/agenda/2021/10/cop26-ceo-climate-alliance-message-to-world-leaders/>). We also leverage various speaking engagements at virtual or physical events to spread our call for accelerating the clean energy transition (e.g. Sankt Gallen Symposium, WEF, COP26 (e.g. <https://windareyouin.com/index.php/news/gwec-announces-cop26-pavilion-schedule/gwec-announces-cop26-pavilion-schedule/>) and to green recovery packages around the world (e.g. <https://gwec.net/wind-industry-statement-on-economic-recovery-from-covid-19/>). Additional engagement through peer-reviewing flagship reports guiding political decision makers (IEA, Irena and Ren21) to ensure strengthen policy recommendations to accelerate the clean energy transition.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Focus of policy, law, or regulation that may impact the climate**

Carbon tax  
Circular economy  
Climate-related targets  
Electricity grid access for renewables  
Emissions trading schemes  
Energy attribute certificate systems  
Renewable energy generation  
Subsidies for renewable energy projects  
Transparency requirements

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Various EU legislative pieces (e.g. Draft Taxonomy Delegated Act, ENTSO-E Consultation on the TYNDP 2020 "Power system needs in 2030 and 2040" report, revision of the Energy & Environment State Aid Guidelines, European Commission Roadmap on the Hydrogen & Gas Markets Decarbonisation Package, Fit for 55 package, ENTSO-E consultation about options for the design of European Electricity Markets in 2030, Carbon border adjustment mechanism, Delegated Act on "additionality" to implement article 27.3 of the Renewable Energy Directive etc.)

**Policy, law, or regulation geographic coverage**

Regional

**Country/region the policy, law, or regulation applies to**

Europe

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Engagement mainly through our association memberships in WindEurope and the Renewable Hydrogen Coalition and through event participation (e.g. speaking engagements at WindEurope events) to call upon Europe to align national commitments with limiting limit global warming to 1.5 degrees C and to fast-track the clean energy transition with wind energy as part of the solutions. Contribution to the establishment of policy recommendations and responses to public consultations established by WindEurope and the Renewable Hydrogen Coalition.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

We support EU policies aiming at accelerating the European energy transition. Our contribution to the establishment of policy recommendations and responses to public consultations by WindEurope and the Renewable Hydrogen Coalition focusses on pushing for increasing renewable energy build-out, upscaling grid infrastructure as well as flexibility solutions on supply and demand side, to remove permitting bottlenecks, to get auction frameworks balancing the need for affordable electricity with healthy supply chains, to re-design electricity markets to align them with the characteristics of variable renewable energy, to remove bottle-necks for corporate renewable energy procurement, to ensure that legislation is not locking fossil fuel based solutions in (ex: only renewable hydrogen shall be called green hydrogen), to have a meaningful price on greenhouse gas emissions, to promote direct electrification through renewable electricity, to lay the ground now to get indirect electrification to decarbonize hard-to-electrify-sectors and to incentivize recycling of wind turbine blades as well as moving towards a circular economy.

Policy recommendations and consultation responses we contributed to can be found here:

<https://windeurope.org/policy/position-papers/>

<https://renewableh2.eu/how-we-get-there/>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Focus of policy, law, or regulation that may impact the climate**

Carbon tax

Climate-related targets

Electricity grid access for renewables

Energy attribute certificate systems

Renewable energy generation

Subsidies for renewable energy projects

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Through our membership in over 40 renewable and wind or renewable energy associations on global, regional and national level, we contribute to the establishment of policy recommendations and consultation responses on various legislative proposals by the associations - with a varying degree of implication, depending on topic and resources. Examples of policies & regulation we contributed comments to are: auction design (e.g. CO, DE, DK, ES, FR, IE, IN, IT, JP, PH, PL, NO, RU, UA, UK, VN, ZA), hydrogen strategies & policies (e.g. AU, CL, ES, DE, DK, PT, UK), recovery plans (e.g. AU, DK, DE, ES, PL, UK), advocacy of clean energy tax provisions (Build Back Better package and budget reconciliation) including extension of the Production Tax Credit and new clean energy manufacturing incentives (US), electricity market design (e.g. DE, UK), offshore wind incentive programs (US - NY, NJ, MA), regulation on aviation safety lights (DE), regulation on transport permits (DE), adoption of international certification standards (IEC) in DE, recycling regulation (FR), R&D test sites (DK), FINAME rules (BR), easing project transportation (BR), port regulation (CO), pushback of anti-clean energy bills in a variety of states (US), renewable energy quota (PH)

**Policy, law, or regulation geographic coverage**

National

**Country/region the policy, law, or regulation applies to**

Asia, Australasia

Eastern Europe & CIS

Southern Europe, Middle East and Africa (SEMEA)

US, Latin America and Caribbean (USLAC)

Western Europe

**Your organization's position on the policy, law, or regulation**

Support with minor exceptions

**Description of engagement with policy makers**

Engagement mainly through our various association memberships and through event participation (e.g. speaking engagements at national wind or renewable energy conferences) to call upon governments to align national commitments with limiting limit global warming to 1.5 degrees C and to fast-track the clean energy transition with wind energy as part of the solutions. Contribution to the establishment of policy recommendations and responses to public consultations established by wind and/or renewable energy associations.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

We support policies aiming at accelerating the energy transition. Our contribution to the establishment of policy recommendations and responses to public consultations by our associations focusses on pushing for increasing renewable energy build-out, upscaling grid infrastructure as well as flexibility solutions on supply and demand side, to remove permitting and other bottlenecks impeding a rapid scale up of renewable energy, to get auction frameworks balancing the need for affordable electricity with healthy supply chains, to re-design electricity markets to align them with the characteristics of variable renewable energy, to remove bottle-necks for corporate renewable energy procurement, to ensure that legislation is not locking fossil fuel based solutions in (ex: only renewable hydrogen shall be called green hydrogen), to have a meaningful price on greenhouse gas emissions, to promote direct electrification through renewable electricity, to lay the ground now to get indirect electrification to decarbonize hard-to-electrify-sectors, to green recovery packages and to incentivize recycling of wind turbine blades as well as moving towards a circular economy.

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

**Trade association**

Global Wind Energy Council (GWEC)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

GWEC is promoting the acceleration of the clean energy transition in line with the objective of the Paris Agreement to limit global warming to 1.5 degrees C and works globally on increasing the contribution of wind energy to achieve this objective. We participate in board meetings and working group meetings to support GWEC's push to accelerate the clean energy transition with wind energy as a key contributor. Where differences arise (we are fundamentally aligned but might diverge on details or communication approach), we solve these through fact based, open discussion with GWEC staff and members to optimize positioning and communication. Policy recommendations are accessible here: <https://gwec.net/>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

125000

**Describe the aim of your organization's funding**

(in EUR) Association member ship fee and COP26 campaign contribution to promote the acceleration of the clean energy transition in line with the objective of the Paris Agreement to limit global warming to 1.5 degrees C (campaign's landing page: <https://windareyouin.com/>)

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

WindEurope

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

WindEurope is promoting the acceleration of the clean energy transition in line with the objective of the Paris Agreement to limit global warming to 1.5 degrees C and works on increasing the contribution of wind energy to achieve this objective in Europe. We participate in board meetings and working group meetings to support WindEurope's push to accelerate the clean energy transition with wind energy as a key contributor. Where differences arise (we are fundamentally aligned but might diverge on details or communication approach), we solve these through fact based, open discussion with WindEurope staff and members to optimize positioning and communication. Policy recommendations can be found here: <https://windeurope.org/policy/>.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

167000

**Describe the aim of your organization's funding**

Association member ship fee (in EUR)

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

Other, please specify (American Clean Power)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

ACP is promoting the acceleration of the clean energy transition in the US. American Clean Power is the voice of companies from across the clean power sector that are powering America's future and providing cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the U.S. economy, and driving high-tech innovation across the nation. Together with ACP we undertook advocacy of clean energy tax provisions (Build Back Better package and budget reconciliation) including extension of the Production Tax Credit and new clean energy manufacturing incentives, we also tried to push back on anti-clean energy bills in a variety of US states.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

870000

**Describe the aim of your organization's funding**

(in EUR) national associations membership fees

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

Other, please specify (National wind energy associations)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

We are member in over 40 national wind energy and renewable energy associations (e.g. in AU, CA, CN, CL, ES, DE, DK, FI, FR, IT, KR, NO, PL, RO, SE, UA, UK, ZA) that promote the acceleration of the clean energy transition in line with the objective of the Paris Agreement to limit global warming to 1.5 degrees C and work on increasing the contribution of wind energy to achieve this objective across the globe. We participate in board meetings and working group meetings in many of these associations (depending on available human resources in or for the country) to support our associations' push to accelerate the clean energy transition with wind energy as a key contributor. Where differences arise (we are fundamentally aligned but might diverge on details or communication approach), we solve these through fact based, open discussion with our associations' staff and members to optimize positioning and communication.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

2130000

**Describe the aim of your organization's funding**

(in EUR) national associations membership fees

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

## C12.3c

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**(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.**

**Type of organization**

Other, please specify (Consultancies, law firms, trade councils)

**State the organization to which you provided funding**

We use consultancies, law firms, trade councils services in various countries. (The Trade Council is part of the Ministry of Foreign Affairs and assists Danish and international companies with export and investment promotion services).

**Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)**

900000

**Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate**

(in EUR) We use consultancies, law firms, trade councils services to support our company and to promote the role of wind energy.

**Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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## C12.4

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**(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**

Vestas\_Annual\_Report\_2021.pdf

**Page/Section reference**

Page 141 in the Annual Report.

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets

**Comment**

No additional comments.

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## C15. Biodiversity

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## C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

## C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, and we do not plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

## C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, and we do not plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

## C15.4

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

## C15.5

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	Please select

## C15.6

**(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In other regulatory filings	Content of biodiversity-related policies or commitments Impacts on biodiversity Risks and opportunities Biodiversity strategy	Vestas Sustainability Report 2021, pp. 37-38 Sustainability Report 2021.pdf

## C16. 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 other comments.



## C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	President and Chief Executive Officer	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	15587000000

### 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**

Ørsted

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

2543

**Uncertainty (±%)**

2

**Major sources of emissions**

Vessel fuel

**Verified**

Yes

**Allocation method**

Allocation based on another physical factor

**Market value or quantity of goods/services supplied to the requesting member**

**Unit for market value or quantity of goods/services supplied**

Please select

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

**Requesting member**

Vattenfall Group

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

0

**Uncertainty (±%)**

0

**Major sources of emissions**

**Verified**

Please select

**Allocation method**

Allocation based on another physical factor

**Market value or quantity of goods/services supplied to the requesting member**

**Unit for market value or quantity of goods/services supplied**

Please select

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

---

**Requesting member**

SSE

**Scope of emissions**

Scope 1

**Allocation level**

Please select

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

174

**Uncertainty (±%)**

**Major sources of emissions**

**Verified**

Please select

**Allocation method**

Please select

**Market value or quantity of goods/services supplied to the requesting member**

**Unit for market value or quantity of goods/services supplied**

Megawatt hours (MWh)

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

---

**Requesting member**

SSE

**Scope of emissions**

Scope 3

**Allocation level**

Please select

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

115000

**Uncertainty (±%)**

**Major sources of emissions**

Figures based on streamlined LCA of V164 including raw materials and production steps. Balance of plant is not included, as customer own scope for CO2 emissions.

**Verified**

Please select

**Allocation method**

Please select

**Market value or quantity of goods/services supplied to the requesting member**

**Unit for market value or quantity of goods/services supplied**

Please select

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

Figures based on streamlined LCA of V164 including raw materials and production steps. Balance of plant is not included, as customer own scope for CO2 emissions.

---

**Requesting member**

ESB Group

**Scope of emissions**

Scope 1

**Allocation level**

Please select

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

169

**Uncertainty (±%)****Major sources of emissions****Verified**

Please select

**Allocation method**

Please select

**Market value or quantity of goods/services supplied to the requesting member****Unit for market value or quantity of goods/services supplied**

Megawatt hours (MWh)

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

## 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	<p>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:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul> <p>The allocation for Production Business Units could be improved by:</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>

## 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**

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****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**

ESB Group

**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****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**

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™.

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**Requesting member**

ESB Group

**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**

3-5 years

**Estimated lifetime CO2e savings****Estimated payback**

Please select

**Details of proposal**

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

**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**

3-5 years

**Estimated lifetime CO2e savings****Estimated payback**

Please select

**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.**

## 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, IECIII B (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

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**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 &amp; 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 &amp; 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 &amp; 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 &amp; 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 &amp; 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 &amp; 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**



**Name of good/ service**

V100-2.0 MW

**Description of good/ service**

Wind turbine - onshore, IECIIB (medium wind)

Unit = kg of CO<sub>2</sub> per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO<sub>2</sub> per MWh]**Type of product**

Final

**SKU (Stock Keeping Unit)****Total emissions in kg CO<sub>2</sub>e 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 &amp; 14044

**Name of good/ service**

V90-2.0 MW

**Description of good/ service**

Wind turbine - onshore, IECIIA (medium wind)

Unit = kg of CO<sub>2</sub> per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO<sub>2</sub> per MWh]**Type of product**

Final

**SKU (Stock Keeping Unit)****Total emissions in kg CO<sub>2</sub>e 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 &amp; 14044

**Name of good/ service**

V150-5.6 MW

**Description of good/ service**

Wind turbine - onshore, special wind class (medium wind)

Unit = kg of CO<sub>2</sub> per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO<sub>2</sub> per MWh]  
(Streamlined LCA)**Type of product**

Final

**SKU (Stock Keeping Unit)****Total emissions in kg CO<sub>2</sub>e 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**

ISO 14040 &amp; 14044

**Name of good/ service**

V162-5.6 MW

**Description of good/ service**

Wind turbine - onshore, special wind class (low wind)

Unit = kg of CO<sub>2</sub> per GWh of electricity generated by Wind turbine [unit is equivalent to grams CO<sub>2</sub> 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**

ISO 14040 & 14044

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SC4.2b

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**(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.

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**SC4.2c**

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**(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
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 1	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.	Please select	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 2	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.	Please select	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 3	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.	Please select	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 understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

**The European Climate Pact Submission**

**Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.**

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

**Please confirm below**

I have read and accept the applicable Terms