

C0. Introduction

C0.1

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

Ford Motor Company is a global automotive company based in Dearborn, Michigan with about 202,000 employees and 61 plants worldwide. Our core business includes designing, manufacturing, marketing, financing and servicing a full line of Ford cars, trucks, SUVs and electrified vehicles, as well as Lincoln luxury vehicles. At the same time, Ford is aggressively pursuing emerging opportunities through Ford Smart Mobility, the company's plan to be a leader in connectivity, mobility, autonomous vehicles, the customer experience, and data and analytics. The company provides financial services through Ford Motor Credit Company. For more information regarding Ford and its products worldwide or Ford Motor Credit Company, visit www.corporate.ford.com. Contributing to a better world has always been a core value at Ford, and our commitment to sustainability is a key part of who we are. Our vision is to create an even more dynamic and vibrant company that improves people's lives around the world and creates value for all of our stakeholders. Our sustainability efforts today can bring about a better tomorrow:- Our pledge to do our part remains the same as we are focused on reducing greenhouse gas emissions in our operations and products, today and in the future. Ford's lineup today brings customers great choices in affordable fuel economy and quality.- We remain absolutely committed to improving fuel efficiency for our customers and for the environment, which is why we're investing an additional \$11 billion in electric vehicle solutions by 2022. For us, mobility is about human progress and making people's lives better in mature economies and major cities as well as helping solve problems in areas of the world that tend to be under-served by technology advances. Beyond our fence line, we're committed to reducing the environmental footprint with our key suppliers. With stakeholders expecting us to be ever-more sustainable, we are working with our complex network of suppliers to reduce our combined environmental footprint through our Partnership for A Cleaner Environment (PACE) program.- To us, driver safety is not just about making safer vehicles. We're also promoting safer behavior through a range of driver assist and semi-autonomous technologies. Details of our strategies, goals and progress can be found within the 2017/18 Sustainability Report (<http://corporate.ford.com/microsites/sustainability-report-2017-18/index.html>)

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

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

United States of America

Other, please specify (Rest of World)

C0.4

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

USD

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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?

Light Duty Vehicles (LDV)

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) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	Comprised of 9 Directors, the Sustainability and Innovation Committee evaluates and advises on the pursuit of innovative practices and technologies that improve environmental and social sustainability making climate change within this committee's purview. The Principal functions of the Committee include advising on the development of strategies, policies, and practices that assist the Company in addressing public sentiment and shaping policy in the areas of energy, climate change, emissions, waste disposal, and water use; maintaining and improving sustainability strategies to create value consistent with the long-term preservation and enhancement of shareholder value and social well-being, including human rights, working conditions, and responsible sourcing; and reviewing trends in global mobility areas such as mobility infrastructure, vehicle ownership and business models, vehicle connectivity, and automation in order to help provide accessible, personal mobility throughout the world.

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	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The Sustainability and Innovation Committee meets at least three times each year to evaluate and advise on the Company's pursuit of innovative practices and technologies. Their responsibilities include: (1) Discuss and advise management regarding the development of strategies, policies, and practices that assist the Company in addressing public sentiment and shaping policy in the areas of energy consumption, climate change, greenhouse gas and other criteria pollutant emissions, waste disposal, and water use. (2) Discuss and advise management on maintaining and improving sustainability strategies, the implementation of which create value consistent with the long-term preservation and enhancement of shareholder value and social well-being, including human rights, working conditions, and responsible sourcing. (3) Review trends in global mobility areas such as mobility infrastructure, vehicle ownership and business models, vehicle connectivity, and automation in order to help provide accessible, personal mobility throughout the world. The Committee is responsible to annually review the Sustainability Report Summary and Company initiatives related to innovation. The Committee reports regularly to the Board (i) following meetings of the Committee, (ii) with respect to such other matters as are relevant to the Committee's discharge of its responsibilities and (iii) with respect to such recommendations as the Committee may deem appropriate. The report to the Board may take the form of an oral report by the Chair or any other member of the Committee designated by the Committee to make such report. The Committee shall perform a review and evaluation, at least annually, of the performance of the Committee and its members, including a review of adherence of the Committee to this Charter. In addition, the Committee shall review and reassess, at least annually, the adequacy of this Charter and recommend to the Nominating and Governance Committee any improvements to this Charter that the Committee considers necessary or appropriate. The Committee shall conduct such evaluation and reviews in such manner as it deems appropriate.

C1.2

(C1.2) Below board-level, provide the highest-level management position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	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.

The highest ranking Company Officer directly responsible for climate related issues is the Chief Sustainability Officer who is also the Group Vice President of Sustainability, Environment and Safety Engineering (SE&SE GVP). The SE&SE GVP reports to the Executive Vice President and President, Global Operations who reports to the President and CEO. As the CSO, the SE&SE GVP chairs the Board Sustainability and Innovation Committee and coordinates topics for review by the Committee and is responsible for delivering the Sustainability Strategies including those in response to climate change and are governed by the Creating Value Roadmap (CVR) process. Topics are requested by the Board or recommended through various Corporate forums as mentioned below. The SE&SE GVP also oversees the Sustainability & Vehicle Environmental Matters (SVEM) group, the Environmental Quality Office (EQO), the Vehicle Homologation & Compliance (VHC) group and the Automotive Safety Office (ASO). These Departments oversee establishing strategies for and the delivery of Vehicle Safety, Stationary and Mobile Source Emissions and Compliance attributes for the company. In particular, SVEM and EQO coordinate the development and yearly review of Climate Change Strategy including a Global Technology Migration Path for CO2 Reduction (Glidepath) to guide both product and facility actions to do our part for Climate Change initiatives. Our strategy is shaped by external factors, including government policies, physical risks such as extreme weather and other effects of climate change, market trends, and investor concern over climate change. The Creating Value Roadmap process is the model for how we run the company. It contains the management processes that we follow to continually improve our performance and deliver our One Ford plan. Fully integrated into how we run the business, it enables us to continually monitor the ever-changing global business environment for risks and opportunities – including those related to sustainability – and use this analysis to inform and adjust our strategies as needed. It also creates stronger accountability for setting, tracking and reporting progress against our goals, objectives, revenue targets, and other financial indicators and stakeholder satisfaction. The CVR process is institutionalized as Policy Letter 25. This helps to ensure we implement sustainability-related risk assessments, planning, strategy implementation and performance reviews consistently around the world. We monitor progress against objectives throughout the year, using the processes set out below. These allow us to respond to new internal and external developments in a timely manner and use these evaluations to inform adjustments to our management approaches where necessary.

- Business Plan Review (BPR): The senior leadership team as led by the CEO (representing all skill teams and business units) hold bi-weekly BPR meetings to review our management of sustainability and other business issues. Ford's sustainability scorecard is reviewed alongside our business units' scorecards at these meetings
- Special Attention Review (SAR): The SAR process brings the senior leadership team together to review significant matters in more detail, and to develop action plans and strategies to address more specific risks and opportunities
- Additional governance forums: Other forums, including the Strategic Programming Meeting, Product Matters Meeting, Quality and Productivity Meeting, and Executive Personnel Committee, enable us to review key elements of our business, make long-term decisions and develop strategic inputs to the Board of Directors

The SE&SE GVP and the Executive Vice President, Product Development and Purchasing jointly lead the Global Sustainability Meeting (GSM), a multidisciplinary senior-level team to oversee actions in response to climate change and sustainable mobility strategies. The meeting is scheduled to meet monthly to provide strategic direction for compliance, govern vehicle environmental compliance policies and strategies, evaluate and report sustainability business environment and impact to Ford, approve and govern each skill teams' Sustainability Integration 5-year plan, long-term goals & metrics, and provide guidance and governance for key Sustainability trends that enable "Leadership.

C1.3

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

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

The Compensation Committee of the Board of Directors approved the specific performance goals and business criteria to be used for purposes of determining the cash awards for 2017 participants, including executive officers, under the Company's shareholder-

approved Annual Incentive Compensation Plan. The Corporate performance criteria and weightings used for 2017 under the plan include those relating to climate change/GHG. The Corporate Executive Team is responsible for approving strategies that include emissions, energy and efficiency targets and review status to plan in Executive Forums including the Corporate BPR. Accomplishments to these targets are included in the calculation of performance incentives.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

Ford's plant managers have targets for many metrics, including environmental metrics such as water use, waste sent to landfill, energy use, CO2 emissions, etc. These targets are included in the calculation of performance incentives.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

Ford's division and operations managers oversee several individual plants and, as such, have targets for many metrics, including environmental metrics such as water use, waste sent to landfill, energy use, CO2 emissions, etc. These targets are included in the calculation of performance incentives.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

The Compensation Committee of the Board of Directors approved the specific performance goals and business criteria to be used for purposes of determining the cash awards for 2017 participants, including executive officers, under the Company's shareholder-approved Annual Incentive Compensation Plan. The Corporate performance criteria and weightings used for 2017 under the plan include those relating to climate change/GHG.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Recognition (non-monetary)

Activity incentivized

Efficiency target

Comment

Ford's Environmental Quality Office presents annual Environmental Leadership Awards in each different region of the globe. Projects are judged by subject matter experts within the Company on environmental benefit, cost effectiveness, replicability, and several other criteria. Awards are presented at regional workshops and also re-presented in ceremonies at the winning facilities.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	2	Short-term horizons, what Ford calls "Now", are—those situations or issues that need to be addressed immediately with little reaction time and limited flexibility to respond. Examples of 'Now' include changes in resource availability, exchange rates or tariffs and unexpected events such as an issue that requires a facility shut-down as in the recent fire at a supplier that resulted in a parts shortage and stopped production of the F-150 pick-up truck.
Medium-term	2	5	Medium-term horizons, what Ford calls "Near", are in the typical length of time to allow for a complete product cycle plan rotation where consumer preferences and regulatory requirements are well known and established and time is available to consider alternatives for an orderly and efficient transition or implementation.
Long-term	5	30	Long term horizons, or what Ford calls "Far" encompass longer term strategic issues that require time and resources to develop efficient and cost effective solutions such as research, technological revolution, and corporate business strategy restructuring

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	We monitor progress against objectives throughout the year, primarily using the bi-weekly Business Plan Review and Special Attention Review and other Executive Forums as required. These allow us to respond to new internal and external developments in a timely manner and adjust our management approaches where necessary. The Forum Charters and Participants provide flexibility to address a wide scope of topics over the full range of timelines. The Global Sustainability Meeting, a multidisciplinary senior-level team, oversees actions in response to climate change and sustainable mobility strategies. The meeting is scheduled to meet monthly to provide strategic direction and governance for compliance, policies and strategies, approve and govern each skill teams' Sustainability Integration 5-year plan, long-term goals & metrics, provide guidance and governance for key Sustainability trends that enable "Leadership".

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

The Creating Value Roadmap (CVR) process is the model for how we run the company. Fully integrated into how we run the business, it enables us to continually monitor the ever-changing global business environment for risks and opportunities – including those related to sustainability – and use this analysis to inform and adjust our strategies as needed. It also creates stronger accountability for setting, tracking and reporting progress against our goals, objectives, revenue targets, and other financial indicators and stakeholder satisfaction. The CVR process is institutionalized as Policy Letter 25. This helps to ensure we implement sustainability-related risk assessments, planning, strategy implementation and performance reviews consistently around the world. Cross-Functional teams use sound science and objective analytics to establish Sustainability Strategies and organizational objectives for both our products and facilities. We monitor progress against objectives throughout the year, using the processes set out below. This allows us to respond to new internal and external developments in a timely manner and use these evaluations to inform adjustments to our management approaches where necessary. As part of our annual business planning process, our business units track their performance using scorecards. Sustainability targets are integral to companywide achievements and are translated into product manufacturing and financial performance metrics.

- **Business Plan Review (BPR):** The senior leadership team (representing all skill teams and business units) hold bi-weekly BPR meetings to review our management of sustainability and other business issues. Ford's sustainability scorecard is reviewed alongside our business units' scorecards at these meetings. Sustainability topics may include pending fuel economy, greenhouse gas or electric vehicle mandate regulations, vehicle performance to regulatory requirements and vehicle sales targets and performance required to meet regulatory requirements.
- **Special Attention Review (SAR):** The SAR process brings the senior leadership team together to review significant matters in more detail, and to develop action plans and strategies to address more specific risks and opportunities as the need arises. Examples of SAR topics include the publication of a draft regulatory requirement with significant impact to Ford product, technology or manufacturing plans or a catastrophic event that requires input or coordination from other skill teams or business units.
- **Additional governance forums:** Other forums, including the Strategic Programming Meeting, Product Matters Meeting, Quality and Productivity Meeting, and Executive Personnel Committee, enable us to review key elements of our business, make long-term decisions and develop strategic inputs to the Board of Directors. Additional forums such as the Global Sustainability Meeting (GSM) are held monthly to monitor and respond to both internal and external influential events and refer to higher level forums as required for awareness and/or resolution. In addition to Sustainability governance, the CVR process includes the Financial planning process which establishes a 5 year plan that is reviewed twice a year. The plan includes a Down Turn analysis similar to the size of the 2008/2009 recession and an event with potential Substantive Financial Impact that may have real firm considerable effect falling into one of the following categories that results in a further reduction in revenue: Significant Business disruption – Marketplace downturn, stop in production/sale of vehicles, labor issue, parts availability and the like. Examples: catastrophic weather event such as a hurricane, tornado or tsunami, global financial market collapse or rebound, change in tariffs or exchange rates, plant or supplier event resulting in inability to produce/manufacture parts or vehicles (i.e., facility fire, worker strike). The recent fire at an F-150 Truck supplier causing an 8 day production shut down resulting in a \$579M EBIT reduction is an example of this. Consumer changes/trends that significantly change what products and services are being sold in which global markets that may positively or negatively affect profits based on profit margins for each vehicle line. Examples: With higher gas prices in Europe, consumers may opt for the more fuel efficient Ford vehicles with EcoBoost engines. A 0.5% increase in European sales may result in a \$1M increase in revenue. . Regulatory Implications Regulations and policies that we are required to follow may have an impact on how and where we operate our business. Climate related topics may include fuel economy and GHG emissions that drive changes in the marketplace or investment in technologies or facilities. Example: If a \$500 incentive is required to sell every BEV, PHEV and HEV sold in the US in 2017 to meet regulatory obligations, the action would reduce revenue by \$46.6M.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

Relevance & inclusion	Please explain

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	It is Ford policy to comply with all environmental regulations. Therefore, it is always relevant to our business to evaluate current regulations to ensure our products are compliant and achieve the necessary CO2 reductions. As a manufacturer of light, medium, and heavy duty vehicles, we must comply with global corporate average greenhouse gas and fuel economy regulations impacting each of those fleets, which require significant ongoing improvements to our vehicles. Ford is a global manufacturer, but our largest vehicle market is the U.S., where we are incorporated. In the U.S., regulatory stringency has been challenging for the light duty fleet because consumer preference has been shifting toward larger vehicles such as crossover utility vehicles (CUVs), SUVs, and trucks, all of which are strengths in Ford's portfolio. However, higher sales of these vehicles can make compliance more challenging. To ensure our fleet continues to be compliant and to ensure we stick to our internal carbon reduction goals, Ford announced significant funding increases for low and zero emission vehicle technologies, such as electrified powertrains. In other countries and regions, such as China and Europe, there are additional challenges because the vehicle greenhouse gas and/or fuel economy requirements are different than in the U.S. This poses an additional risk as we have to tailor our vehicles that may be designed for the U.S. market to those markets the vehicles offered may have lower volumes thereby increasing the cost to consumers. To minimize risk, product plans are evaluated on a regular basis to ensure product sales meet our regulatory obligations. Product features, content, performance and availability may need to be adjusted to meet those requirements which directly affects our manufacturing and supplier plans and sales. Our existing processes, such as the Business Planning Review process, offer a forum for regulatory risk assessments. Additionally, we evaluate our CO2 glidepath against existing regulations to ensure we are both meeting our CO2 goals and regulatory requirements globally.
Emerging regulation	Relevant, always included	Emerging regulation is always included for those regulations that have a firm proposal. In the major markets where Ford does business (e.g. North America, China, Europe, Brazil, etc.), governments have vehicle fuel economy and/or greenhouse gas standards in place, and continue to set increasingly more stringent standards. In particular, COP21 is driving CO2 regulatory stringency globally. Governments, such as California, have set aggressive near and long-term goals to hold to their commitments to curb temperature rise, which impact greenhouse gas and fuel economy standards for vehicles. California is a large market for Ford light, medium and heavy-duty vehicles. There is risk as part of the Mid-term review that California and other states will have unique requirements greenhouse gas requirements again if a compromised solution cannot be reached. In addition, we are a medium and heavy-duty manufacturer that will be subject to the anticipated medium and heavy-duty zero emission vehicle mandate in California. In order to continue to sell vehicles in California and other regions with firm COP21 commitments, The Business Planning Review process offers a forum for communicating emerging regulatory risk throughout the company so Ford can ensure new and emerging regulatory requirements are considered in product planning.
Technology	Relevant, always included	Technology is always included because hardware and software solutions need to be available in a timeframe that allow us to meet our CO2 reduction goals in a cost-effective manner, both for our stationary sources and products. As we make further reductions, it becomes increasingly more challenging to continue making incremental improvements because the technology that is simplest to implement has already been utilized. Further advancements could be more costly for the CO2 improvement gained, and may have a longer payback than some of the technologies adopted early on. Additionally, technology may not be available to make the improvements at the rate required to meet regulatory or internal requirements. For example, in the U.S., when the first "One National Program" began, it was easier and relatively inexpensive to meet the increased stringency with simple changes such as engine calibration adjustments. However, the cost per gram CO2 reduction has become more expensive, so Ford has needed to implement advanced powertrain technologies (e.g. BEV, PHEV) to meet these increasingly stringent requirements. Ford has developed a unique portfolio of powertrain options that plays to our strengths, such as SUVs and trucks. Ford minimizes risk by meeting our target customers' needs (e.g. features, cost), while implementing the technological improvements required to maintain compliance. Even an issue that is strictly policy-related has technology implications. For instance, Urban Low Emission Zones which are becoming more common in Europe limit urban emissions by restricting vehicle access. To minimize customer inconvenience, Ford must make available vehicles that allow for customer mobility despite restrictions (e.g. low emission vehicles, alternative powertrains).
Legal	Not relevant, included	While we don't currently think there are any significant legal risks (apart from the regulatory risks identified above), we always seek the advice of legal counsel to confirm possible legal implications.
Market	Relevant, always included	Ford always takes into consideration changing market conditions that may impact our company's goals. To meet our internal CO2 reduction targets (i.e. adhere to our CO2 glidepath), technological improvements are needed in the near and long-term. For example, Ford announced in 2016 that we are investing \$11 billion for the development of electrified vehicle solutions by 2020, which will help us meet these goals. However, although we have invested heavily, our CO2 glidepath climate goals are at risk due to market conditions. In particular, there is a risk that there will continue to be low market acceptance of fuel efficient technologies, including plug-in electric vehicles. In the U.S. for instance, the battery electric vehicle market has remained below 1%, partially due to low gasoline prices. Although Ford has invested heavily in this market, it is unclear whether consumers will widely accept these technologies in the future without significant incentives. Meeting our climate goals relies on wide market acceptance of plug-in electric vehicles. Additionally, there is a risk that societal changes could impact how humans move in the future (the mobility market), which will impact Ford's overall CO2 goals. For instance, in large metropolitan areas, vehicle ownership could become less common with increased interest in ride hailing and car-sharing services. These types of human mobility changes could impact CO2 emissions from the in-use fleet as a whole. To take advantage of this emerging trend, Ford has established Ford Smart Mobility LLC to ensure our company is focused on providing improved mobility solutions rather than focusing solely on increasing vehicle sales. Ford is responding to these changing customer needs in large metropolitan areas such as London and San Francisco by deploying Ford's Chariot service. As an alternative we also launched GoBike, a bike sharing service in San Francisco in 2017. Additionally, because our global markets are all different from product availability, regulations and customer demand, Ford analyzes climate change risk and sets climate change targets for each region individually rather than on a global basis. Our Ford-specific glide paths (CO2 reduction goals) are calculated for our major operating regions. This enables the regions to design a product plan specific to their market's needs.
Reputation	Relevant, sometimes included	Ford is committed to CO2 reductions based on the Paris Accord because we are committed to making the world a better place. However, sometimes, reputation is relevant when we are determining climate change-related actions to take. For example, to ensure a positive working relationship with stakeholders such as investors and NGOs, we need to ensure we have a positive reputation in terms of doing our part to combat climate change. Alternatively, a bad reputation could result in tension and a lack of trust when dealing with these key stakeholders. Ford remains engaged with our stakeholders, such as through ICCR and Ceres stakeholder events, to communicate our commitment to climate change improvements and to better understand the concerns of our stakeholders.

	Relevance & inclusion	Please explain
Acute physical	Relevant, sometimes included	We sometimes consider acute physical risks in our CO2 assessments. Evaluating this type of risk is dependent on the topic. For example, we are active in the Health Effects Institute (HEI) to remain aware of possible human health risks. For facilities that may be in zones with a higher risk of storms or floods such as our manufacturing site in Thailand or the Philippines, actions are taken to ensure continued availability of fuel to minimize production disruptions. Our purchasing operations has implemented a Risk Exposure Index developed by the Ford-MIT Alliance. The REI enables us to identify the key elements in the supply chain that we should monitor, along with the industry as a whole, for potential disruptions to production due to climate change-induced weather events or other natural or man-made disasters. Our model includes GDACS (Global Disaster Alert and Coordination System) and HEWS (Humanitarian Early Warning Service) as a part of our monitoring process for potential disruptions related to weather. As weather is difficult to predict, we use this for exposure assessment and recovery planning. In 2015, we used these tools to understand the potential business disruption exposure of typhoons hitting the Philippines. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This risk assessment is updated based on new data and takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes.
Chronic physical	Relevant, sometimes included	We sometimes consider chronic physical risks in our CO2 assessments. Evaluating this type of risk is dependent on the topic. For example, we are active in the Health Effects Institute (HEI) to remain aware of possible human health risks resulting from vehicle emissions such as criteria pollutants or GHG. We have also identified that approximately 25 percent of our operations, including the Cuautitlán, Mexico facility, are at risk to be water-scarce based on the Global Water Tool, developed by the World Business Council for Sustainable Development (WBCSD). Water availability is a local issue, therefore we conducted our analysis using detailed watershed-level data. According to our analysis, about 25 percent of our operations are located in regions that are now or will be considered to be at risk for water scarcity by 2025. To address this issue, Ford implemented a water reduction strategy to reduce water utilization at all manufacturing facilities with special attention to reduce utilization of potable water sources. Ford also engages suppliers to take similar actions at their facilities.
Upstream	Relevant, sometimes included	We consider the upstream impacts of our products in our risk assessments and work with suppliers to minimize impact. Some suppliers have manufacturing facilities in water-scarce or severe weather prone locations that may carry a risk for continuity of supply. In addition, some suppliers have manufacturing operations that are energy-intensive. We ask selected suppliers to respond to the CDP climate change questionnaire so that we can better understand our collective environmental footprint and identify "hotspots" for energy use and CO2 emissions. Through the Ford Partnership for a Cleaner Environment (PACE) program, we educate selected suppliers about ways to decrease their energy use (and therefore CO2 emissions). We ask suppliers to set CO2 emissions targets and report reductions to Ford. We monitor their progress and provide technical support as needed. Through the Responsible Business Alliance (RBA), third-party auditors conduct environmental audits at selected supplier sites. We work with these suppliers to address any identified non-conformances. We are also asking some suppliers to respond to a Sustainability Self-Assessment questionnaire, which asks for details about their formal environmental policy including energy consumption.
Downstream	Relevant, sometimes included	We sometimes consider the risk from lifetime use of our vehicles (e.g. what happens after our vehicles leave the show room). Our CO2 glidepath gives the emission reduction levels for 2°C stabilization over time, and assumes a certain level of lifetime miles traveled to assess CO2 emissions from the in-use car fleet. Our glidepath is based on climate science and modeling recognized by the IEA, and is specific to Ford's emissions. Because the transport sector emits about only 20-25% of global CO2, and road transport is about 75% of total transport [IEA CO2 Emissions from Fuel Combustion], the glidepath assumes that other sectors are also doing their part to combat climate change. We review our product development plans annually to ensure our vehicles are aligned with the 2°C stabilization glide path. While our plans are based upon delivering long-term reductions in CO2 emissions from new vehicles that are similar to those for the industry-average LDV glide paths, we anticipate that the reductions will vary from year to year. This is due to market forces that we do not fully control, such as energy price fluctuation, changes in the mix of vehicles demanded by consumers and other factors that influence our product plans. Recognizing the long timeframe of climate science, we update our glide path model's assumptions and input data every five years. In 2017, we completed a major revision, moving to a 2°C temperature stabilization pathway, which is similar to our previous 450 ppm CO2 concentration-based pathway. We also evaluated a 1.5°C sensitivity scenario. Our 2017 glide path is specific to LDVs, ¹ instead of an all-sector pathway. Between major updates, we conduct other sensitivity analyses to understand the effect on the glide paths of global changes, such as economic conditions, biofuel availability or regulations. We also have partnerships with the petroleum industry to encourage improved fuel quality, to minimize climate change impact downstream as a result of customers fueling their vehicles.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

We prioritize the risks and opportunities posed by climate change consistent with our materiality analysis, the magnitude of the impact and our ability to control the outcome. Our long-term strategy is to contribute to climate stabilization by continuously reducing our operational greenhouse gas (GHG) emissions and energy usage; develop flexible lower-GHG-emission product marketing plans; and working with industry partners, energy companies, consumer groups and policy makers to establish an effective and predictable market, policy and technological framework for reducing GHG emissions. Our product plans in all regions are aligned with our overall goal of contributing to climate stabilization. From a physical perspective, we assess risks and opportunities to our facilities at least annually. Extreme weather has the potential to disrupt the production of natural gas, a fuel we need to manufacture our vehicles. To minimize the risk, we have firm delivery contracts with natural gas suppliers and installed propane tank farms at key manufacturing facilities as a source of backup fuel. In 2015, we used tools to understand the potential business disruption exposure of typhoons hitting the Philippines. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This risk assessment is updated based on new data and takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes. As an opportunity, we developed our water strategy to prioritize addressing our use, supplier use and community issues in water-stressed regions identified using the Global Water Tool, developed by the World Business Council for Sustainable Development. We are investing in water-saving technologies and process improvements across our global operations reducing operational costs while contributing to social welfare of the local community. From a transitional perspective, we are at risk for customer acceptance of electric vehicles in volume to meet our regulatory requirements. We continually monitor our sales against regulatory requirements and make adjustments as needed to meet regulatory requirements which may reduce revenue as with the introduction of a sales incentive on EVs. Alternatively as an opportunity, we developed the EcoBoost engine technology to reduce greenhouse gas emissions. Customers have embraced the technology for the increased fuel economy while maintaining performance so the introduction has improved company reputation and sales.

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

Transition risk

Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact driver

Market: Change in revenue mix and sources resulting in decreased revenues

Company- specific description

In our global markets (e.g. US, EU, China, Saudi Arabia, Brazil, etc.), Ford is required to comply with fuel economy and/or GHG standards. If these governments implement more stringent fuel economy or GHG standards in periods of unfavorable market conditions or inadequate technology development, we likely would have to take actions that could have adverse effects on our sales volume and profits. Such actions could include restricting engines and options; increasing market support programs for our most fuel-efficient vehicles including the Focus BEV, Fusion/MKZ/Mondeo PHEV and hybrid, C-MAX hybrid, F-150, Figo, and Fiesta ; and curtailing the production and sale of certain vehicles in order to maintain compliance.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Potential financial impact

77000000

Explanation of financial impact

Financial implications would vary depending on the specific details of a given scenario, including the stringency of the standard relative to market conditions, and the degree of flexibility in the regulatory framework. For illustration purposes, a regulatory program that drove a 1% decrease in sales within North America and Europe could lead to an estimated decrease in net income of over \$77 million, based on 2017 regional sales and profit. It should be noted that financial impacts are not necessarily "linear" in nature. The adverse financial impacts of large initiatives that drive product restrictions and/or production shutdowns could be exponentially greater than the impacts of less drastic initiatives.

Management method

We manage the risk by being an active participant in the legislative and regulatory processes used to set standards by providing info on the effects of proposed regulations on our business while supporting the goal of decreasing CO2 emissions with our scientific approach. On issues of the highest priority, we maintain regular dialogue with legislators and regulatory officials in our major markets, sharing our expertise and adding our perspective to the policy-making process. In 2017, Ford met with a number of policymakers, including U.S. EPA, NHTSA, and California ARB, to discuss the fuel economy and GHG standards mid-term evaluation, emphasizing capabilities and challenges related to future light-duty compliance. We also manage the risk through our Power of Choice strategy offering a wide range of fuel efficient vehicles and powertrains to meet customers' needs (e.g., advanced EcoBoost engines, HEV, PHEV, BEV and in some regions advanced diesel) to allow for increased flexibility and customer choice. We will add 40 new electrified vehicle (EV) solutions to our portfolio by 2022. We have increased EcoBoost offerings to include more than 80% of our global nameplates. We have also invested in lightweighting through use of aluminum in our F-150 and Super Duty, and more recently in our Lincoln Navigator and Ford Expedition. We believe the Power of Choice approach puts us in a good position to be able to meet regulatory requirements yet respond to changes in market demand.

Cost of management

19000000

Comment

Ford's Engineering, Research and Development expenses were \$8 billion in 2017. Ford also announced in 2016 that we are investing \$11 billion for the development of 40 electrified vehicle solutions by 2022. There are limits on our ability to achieve fuel economy improvements over a given timeframe primarily relating to the cost and effectiveness of available technologies, consumer acceptance of new technologies, the appropriateness of certain technologies for use in particular vehicles, the availability of supporting infrastructure for new technologies, and the resources necessary to deploy new technologies across a wide range of products and powertrains in a short time.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Global climate change has the potential to lead to increased extreme precipitation events that produce flooding which can disrupt production either directly or through interruptions to the supply chain. Ford has both direct operations plants and suppliers' facilities in areas at the risk of flooding. In 2011, flooding in Thailand led to 34,000 units of lost production.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Potential financial impact

170000000

Explanation of financial impact

An example of a possible financial impact due to an acute weather event could be lost production due to either a Ford facility or a supplier facility production being disrupted. Based on data from our experience with flooding in Thailand in 2011, over \$5000 was lost for each unit of reduced production. (34,000 units) resulting in a loss of revenue for the company.

Management method

Our purchasing operations has implemented a Risk Exposure Index developed by the Ford-MIT Alliance. The REI enables us to identify the key elements in the supply chain that we should monitor, along with the industry as a whole, for potential disruptions to production due to climate change-induced weather events or other natural or man-made disasters. Our model includes GDACS (Global Disaster Alert and Coordination System) and HEWS (Humanitarian Early Warning Service) as a part of our monitoring process for potential disruptions related to weather. As weather is difficult to predict, we use this for exposure assessment and recovery planning. In 2015, we used these tools to understand the potential business disruption exposure of typhoons hitting the Philippines. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This risk assessment is updated based on new data and takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes.

Cost of management

1500000

Comment

Ford has made over \$1.5 million in research and capital investments to implement the supply chain monitoring program. There are plans to continue investing more over the next 3-4 years. Higher utility rates have prompted Ford to revisit and implement energy-efficiency actions that previously did not meet our internal rate of return

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Global climate change has the potential to exacerbate droughts. We cannot be certain that we will always have access to water of the quantity and quality that our operations require. We have identified that approximately 25 percent of our operations, including the Cuautitlán, Mexico facility, are at risk to be water-scarce based on the Global Water Tool, developed by the World Business Council for Sustainable Development (WBCSD). Water availability is a local issue, therefore we conducted our analysis using detailed watershed-level data. According to our analysis, about 25 percent of our operations are located in regions that are now or will be considered to be at risk for water scarcity by 2025.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Potential financial impact

173000000

Explanation of financial impact

Our facilities in Mexico are located in water-scarce regions. Our manufacturing facility in Cuautitlán, Mexico, for example, is already subject to water-withdrawal limitations. The Cuautitlán plant produced over 68,000 vehicles in 2017, or 2% of North American production. If Cuautitlán production was stopped due to the unavailability of water, 2% of 2017 North American income before taxes

is over \$173 million, assuming production of those products could not be moved to another facility.

Management method

Our water strategy aligns with the core elements of the CEO Water Mandate. Companies that support the CEO Water Mandate commit to implementing the framework's six core elements for water management and pledge to publicly report their progress annually. Ford endorsed the Water Mandate in 2014. We developed our water strategy to prioritize addressing our water use, supplier water use and community water issues in water-stressed regions identified using the Global Water Tool, developed by the World Business Council for Sustainable Development (WBCSD). We are investing in water-saving technologies and process improvements across our global operations. Wherever feasible, we take successful projects and mirror them in other locations. Our newest plants use a set of advanced and environmentally friendly technologies to dramatically cut water use such as implementing membrane biological reactors (MBR) and reverse-osmosis processes to recycle water from our on-site wastewater treatment plants in arid regions, such as at plants in Chihuahua and Hermosillo, Mexico; Pretoria, South Africa; Chennai, India; and Chongqing, China. At our Ford CSAP in Mexico, we have invested over 1.6 million dollars over the past five years in water saving/reuse projects like WWTP recycling system, utilizing a gray water source and separation of drinking water from industrial recycled water to name a few. These projects resulted in a 50% reduction in withdrawal of fresh drinking water..

Cost of management

1600000

Comment

Many of these new systems require substantial capital investments, so we have been adding them on a rolling basis as we update equipment and bring new facilities online, especially in areas where water is more scarce. .

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Market: Changing customer behavior

Type of financial impact driver

Market: Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description

Climate change has increased consumer interest not only for "green" vehicles but also for alternative transportation solutions. In many cities, consumers are dealing with inconvenient, congested transportation systems that create pollution, reduce fuel economy and waste travelers' time. With more people living in congested urban areas, consumers desire more and different forms of mobility. As a provider of personal transportation vehicles and mobility solutions, Ford must be prepared to respond to these changing customer needs in large metropolitan areas such as London and San Francisco. Ford's Chariot service has expanded to several cities including San Francisco, New York City, and Austin, TX. We also launched GoBike, a bike sharing service in San Francisco in 2017.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

75000000

Explanation of financial impact

Our ability to satisfy changing consumer preferences with respect to type or size of vehicle, as well as design and performance characteristics, affects our sales and earnings significantly. Financial risk due to changing consumer behavior is possible as the demand for our traditional vehicles could decrease as consumers seek alternatives to personal vehicle transportation. Financial implications would vary depending on the specific details of a given scenario, including the type and extent of changes in the marketplace and personal transportation. For illustration purposes, changing consumer behavior that drove a 1% decrease in North American sales could lead to an estimated decrease in net income of nearly \$75 million, based on 2017 earnings and sales rates. It should be noted that financial impacts are not necessarily "linear" in nature. The adverse financial impacts of large changes in consumer behavior could be exponentially greater than the impacts of less drastic changes.

Management method

Consumer transportation needs and technology are transforming the way we think about mobility solutions. In order to respond effectively, we created a new subsidiary, Ford Smart Mobility LLC (FSM), to develop commercially ready mobility services and invest in promising mobility-related ventures. The strategy is to maintain strength in core business that generates profits, helping to kick-off new mobility business until it is self-sustaining and profitable.. We manage the risk of consumer demand for alternative transportation solutions through our Blueprint for Mobility, setting now-, near- and far goals for solutions to mobility systems. It highlights our thinking about transportation in 2025 and beyond, and identifies the types of technologies, business models, products, and partnerships needed. In 2016 we established the new City Solutions team to work with cities on expanding mobility services worldwide as part of FSM.. We are researching technology and using ingenuity to make car-sharing easier; remotely move vehicles across cities; use vehicles and bicycles to gather information about traffic and parking conditions. For example, Our Smart Mobility plan's focus areas are two key areas of mobility – flexible use and ownership, and multimodal urban travel solutions. Ford's Chariot service has expanded to several cities including San Francisco, New York City, and Austin, TX. We also launched GoBike, a bike sharing service in San Francisco, in 2017.

Cost of management

19700000

Comment

Ford's Engineering, Research and Development expenses were \$8 billion in 2017. For reference, R&D expenses were \$7.3 billion in 2016, \$6.7 billion in 2015 and 2014 and \$6.2 billion in 2013. We are investing \$11 billion in electrified vehicle (EV) solutions. In 2016, we announced plans to invest \$700 million to expand the Flat Rock Assembly Plant in Michigan into a factory that will build high-tech autonomous and electric vehicles.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Market: Uncertainty in market signals

Type of financial impact driver

Technology: Research and development (R&D) expenditures in new and alternative technologies

Company- specific description

Fuel prices are volatile. Consumers are sensitive to fuel price and tend to buy vehicles with higher fuel economy when gasoline is expensive, but historically have chosen vehicles with lower fuel economy when fuel prices have been low. From 2006 to 2010 gasoline prices increased significantly, and sales of our higher fuel economy vehicles increased. But from mid-2014 through 2016, there was a significant decline in gasoline prices, resulting in decreased sales of our vehicles with higher fuel economy and alternative powertrains. Ford is a global manufacturer, but we are based out of the U.S., which is our largest vehicle market. In the U.S., consumer preference has been shifting toward larger vehicles such as crossover utility vehicles (CUVs), SUVs, and trucks (e.g. Escape, Explorer, F150), all of which are strengths in Ford's portfolio. However, higher sales of these vehicles results in higher CO2 emissions. To ensure we stick to our internal carbon reduction goals and meet increasingly stringent regulatory requirements, Ford has increased use of low emission vehicle technologies, such as electrified powertrains. In other countries and regions, such as China and Europe, there are additional challenges because consumer needs are different in these markets. To meet other markets' needs, Ford sometimes will tailor our vehicles, which are typically designed for the U.S. market to those markets.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

46600000

Explanation of financial impact

When fuel prices are low, customers tend to choose less fuel-efficient vehicles. This fluctuation may not follow long-term cycle planning for compliance with CO2 regulations. Negative financial implications result if we have to provide price support to

encourage the purchase of advanced-technology vehicles to meet the regulations. For example, in 2017, we sold over 93,000 BEVs, HEVs, and PHEVs in the United States. If we had to supply \$500 price incentives to customers to encourage the purchase of these fuel-efficient electrified vehicles, that would amount to an expense of \$46.6 million.

Management method

We manage the risk of fuel price volatility through our Power of Choice strategy, through which we offer our customers a wide range of fuel-efficient conventional vehicles and powertrains including EcoBoost turbocharged direct-injection gasoline engines, as well as hybrid vehicles, plug-in hybrid electric vehicles and battery electric vehicles. We will add 13 new electrified vehicle (EV) solutions to our portfolio by 2020. We have increased EcoBoost offerings to include more than 80 percent of our global nameplates. We have also invested in lightweighting through use of aluminum in our F-150 and Super Duty, and more recently the Lincoln Navigator and Ford Expedition. This global approach puts us in a better position to be able to respond to changes in market demand due to fuel price volatility.

Cost of management

19000000

Comment

Ford's Engineering, Research and Development expenses were \$8 billion in 2017. We are investing \$11 billion in electrified vehicle (EV) solutions and will launch 40 EVs to our portfolio by 2022 including 16 BEVs and 24 PHEV/HEVs.

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

CO2-related taxation in Europe drives the market to low CO2 vehicles and incentivizes the up-take of new fuel efficient vehicles. Because our global portfolio includes a range of fuel-efficient technologies including EcoBoost and we recently announced an \$11 Billion investment in global EV products including the introduction of 16 BEV and 24 PHEV/HEV by 2022, Ford is well-positioned to meet the need of such a shift in Europe and should perform well relative to other manufacturers, providing opportunities for growth and increased market share.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Potential financial impact

1000000

Explanation of financial impact

Investments in vehicle technology can potentially be recouped if there is sufficient customer demand for the advanced-technology vehicles. Financial implications would vary depending on the specific details of a given scenario, including the extent of market demand for advanced-technology vehicles and the profitability of the vehicles responsible for an increase in sales. For illustration purposes, an increase in sales within Europe of 0.5% could lead to an estimated increase in net income by about \$1 million, based on 2017 EU sales and profit. It should be noted that financial impacts are not necessarily "linear" in nature. The financial impacts of increased sales of advanced technology vehicles could be different than those of conventional vehicles, and could be positive or negative.

Strategy to realize opportunity

Ford has institutionalized the Creating Value Roadmap Process, which includes a Business Plan Review and Special Attention Review process where, on a weekly basis (and more often where circumstances dictate), the senior leadership of the Company from each of the Business Units and the Functional Skill Teams reviews the status of the business, the risks and opportunities presented to the business (once again in the areas of compliance, reporting, operating and strategic risks), and develops specific plans to address those risks and opportunities. If consumer demand shifts toward different product types, such as vehicles with higher fuel economy and advanced technology powertrains in response to tax incentives, our European product offerings under our Power of Choice strategy include a variety of low-CO2 vehicles: small diesel and gasoline vehicles, EcoBoost engines, and hybrid, plug-in hybrid, and battery electric vehicles. We will 40 electrified vehicle (EV) solutions in our portfolio by 2022. We have increased EcoBoost offerings to include more than 80 percent of our global nameplates.

Cost to realize opportunity

19000000

Comment

Ford's Engineering, Research and Development expenses were \$8 billion in 2017. If the tax break-points still allow efficient technology like EcoBoost and if the tax break-points are harmonized across regions, costs can be managed via economies of scale. We are investing \$11 billion in electrified vehicle (EV) solutions including 16 BEV and 24 PHEV/HEV to be launched by 2022.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Type of financial impact driver

Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company- specific description

Ford participates in the mandatory EU Emissions Trading System, which commenced in January 2005. This type of CO2-related taxation and emissions reporting obligations in Europe drive energy efficiency projects at our manufacturing facilities in Europe. This included the installation of a combined heat and power (CHP) unit at the Saarlouis facility, , installation of 5,900 kW wind turbines at Dagenham and a 1,200 kW solar array in Merkenich.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Potential financial impact

326000

Explanation of financial impact

Achieving the corporate goal of improving global facility energy use per vehicle produced by 25 percent between 2011 and 2016 also reduced our costs for the energy. Since 2013, Ford facilities in Europe have reduced total scope 1 + scope 2 CO2 emissions by 11%, which is approximately 96,000 tCO2e. Many Ford manufacturing lighting systems have been replaced by LED lighting

fixtures providing a significant energy cost savings per site of \$326000 per year.

Strategy to realize opportunity

We take a rigorous and holistic approach to reducing the environmental impacts of our manufacturing facilities. Our manufacturing management team translates our comprehensive global environmental targets into annual regional- and facility-level targets, which differ depending on the relevant regulations and financial and production constraints in each region. Ford's Environmental Operating System (EOS), which is fully integrated into the Ford Production System (FPS), provides a standardized, streamlined approach to maintaining compliance with all legal, third-party and Ford internal requirements, including government regulations, ISO 14001 and Ford's own environmental policies and business plan objectives and targets. In 2015, we continued the global roll out of the Energy Management Operating System (EMOS) within the FPS (Ford Production System) throughout Europe, enabling our teams to manage demand and remotely control plant energy and heating systems for greater energy efficiency.

Cost to realize opportunity

1350000

Comment

At Ford, most costs are internal in nature. The trading scheme requires Ford to apply for emissions permits, meet rigid emissions monitoring and reporting plans, arrange for third-party verification audits and manage tax and accounting issues related to emissions transactions. Energy efficient facility solutions are implemented to help manage the impact of the facility.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

As consumers become more aware of climate change and increasingly "think green," our projected vehicle fleet mix is expected to shift toward vehicles with higher fuel economy and advanced technology powertrains. As a customer- and product-driven company, our vehicles are the foundation of our business. Our products are also a major focal point of our environmental impacts and our efforts to reduce those impacts. The Company's product plans are well positioned to accommodate this shift in consumer demand. We continue to offer a number of higher fuel economy and advanced technology powertrains, such as advanced EcoBoost gasoline (included in more than 80% of our global nameplates), HEV (including C MAX, Fusion, Mondeo, Police Responder Hybrid Sedan, and Lincoln MKZ), PHEV (including Fusion Energi, C MAX Energi, Mondeo Energi, Police Special Service Plug-in Hybrid Sedan), BEV (Focus Electric) and in some regions advanced diesel engines, such as the F-150 diesel.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Low

Potential financial impact

0

Explanation of financial impact

Neutral. Our Power of Choice strategy gives us flexibility, within limits, to shift production toward relatively high-demand powertrains, and away from powertrains that are relatively less in demand. In this way we try to be well-positioned to maintain our sales volumes and market share in any market. Vehicle revenue could decrease as a result of product choice shifting to fuel efficient models.

Strategy to realize opportunity

Ford has institutionalized the Creating Value Roadmap Process, which includes a Business Plan Review and Special Attention Review process where, on a weekly basis (and more often where circumstances dictate), the senior leadership of the Company from each of the Business Units and the Functional Skill Teams reviews the status of the business, the risks and opportunities presented to the business (once again in the areas of compliance, reporting, operating and strategic risks), and develops specific

plans to address those risks and opportunities. The Sustainability and Innovation Board of Directors Committee evaluates and advises on the Company's pursuit of innovative practices and technologies that improve environmental and social sustainability, enrich our customers' experiences, and increase shareholder value. The Committee also discusses and advises on the innovation strategies and practices used to develop and commercialize technologies. We are exploring the integration of mobility solutions, connectivity, autonomy and data analytics from a consumer perspective and developing more ways to transform the consumer experience. As a result, we created a new subsidiary, Ford Smart Mobility LLC, to develop commercially ready mobility services and invest in promising mobility-related ventures. The strategy is to maintain strength in core business that generates profits, helping to kick-off new mobility business until it is self-sustaining and profitable

Cost to realize opportunity

19000000

Comment

There are costs associated with maintaining such flexibility, in terms of continuing to offer and produce a wide range of vehicles. Ford's Engineering, Research and Development expenses were \$8 billion in 2017. We are investing \$11 billion in electrified vehicle (EV) solutions with plans to introduce 16 BEVs and 24 PHEV/HEV by 2022.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Innovative and fuel efficient products help the reputation of Ford Motor Company. For example, Ford's fuel-efficient and powerful 1.0-litre EcoBoost was named International Engine of the Year in 2012-2014, and Best Sub-1 Liter engine in 2012-2016. Launched in Europe in 2012, the engine is now available in 10 Ford vehicles in Europe and in 72 countries worldwide. In 2016, Ford hit 1 million sales of the EcoBoost F-150 in the US. The 2.7-liter EcoBoost engine and 3.5-liter EcoBoost engine are most popular among F-150 customers, and save customers more than 110 million gallons of gasoline annually. Technology such as the EcoBoost engine positions Ford as an innovative company that is democratizing fuel economy technology for all customers now - rather than focusing only on expensive future technologies.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Potential financial impact

2500000000

Explanation of financial impact

We launched the EcoBoost engine in 2009 and have produced more than 5 million. We produced more than 2.2 million EcoBoost engines in 2015, up nearly 40 percent from 2014. In 2015, annual global EcoBoost engine capacity reached approximately 2.5 million units, and more than 80 percent of our global nameplates were available with EcoBoost. If vehicles with an EcoBoost engine were sold at \$1000 premium compared to the base engine, it would increase Ford revenues by \$2.5B.

Strategy to realize opportunity

In order to maximize performance, Ford monitors consumer behaviors, buying habits and other influential factors such as public policy and fuel costs to ensure we are providing customers the products they want and need. Providing Innovative and fuel efficient products helps the reputation of Ford Motor Company which in turn increases Ford vehicle sales. As a result, Ford developed Our Power of Choice strategy to provide multiple pathways to fuel efficiency for customers of all vehicle types. Electrification options include BEV, PHEV and HEV models, while through our diesel and EcoBoost strategy, we offer conventional, affordable, fuel-efficient vehicles to all customers, i.e. democratizing fuel efficiency.

Cost to realize opportunity

0

Comment

Using economies of scale across Asia, Europe and North America in a multitude of vehicle nameplates manages the costs very well.

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	Current and future regulations and the adoption of a 2 Degree Glidepath by Ford to stabilize global temperature rise have resulted in global product and service plans, with strong investment in EV, Autonomous Vehicles and Smart City Solutions. This impacts the global business through increased costs to improve fuel economy with potential opportunities for increased demand for fuel efficient vehicles and alternative mobility services. For example, we have made investments in order to offer our customers a wide range of fuel-efficient conventional vehicles and powertrains including EcoBoost turbocharged direct-injection gasoline engines, as well as hybrid vehicles, plug-in hybrid electric vehicles and battery electric vehicles. We will add 40 new electrified vehicle (EV) solutions to our global portfolio by 2022 including 16 BEVs and 24 PHEV/HEV. We have increased EcoBoost offerings to include more than 80 percent of our global nameplates. We have also invested in lightweighting through use of aluminum in our F-150 and Super Duty, and more recently in the Lincoln Navigator and Ford Expedition. We created a new subsidiary, Ford Smart Mobility LLC, to develop commercially ready mobility services and invest in promising mobility-related ventures. The strategy is to maintain strength in core business that generates profits, helping to kick-off new mobility business until it is self-sustaining and profitable. We are researching technology and using human ingenuity to make car-sharing easier; remotely move vehicles across cities; use vehicles and bicycles to gather information about traffic and parking conditions. For example, Our Smart Mobility plan's focus areas are two key areas of mobility – flexible use and ownership, and multimodal urban travel solutions. Ford's Chariot service has expanded to several cities including San Francisco, New York City, and Austin, TX. We also launched GoBike, a bike sharing service in San Francisco, in 2017
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Extreme weather events or other effects of climate changes including droughts and floods, can pose a risk to our supply chain. Ford has many suppliers in northern Tamil Nadu state in India, especially in the Palar- Ponnaiyar river basin, which could have possible future business challenges. The area is under current water stress, which has the potential to negatively impact Ford by causing near-term or future possible supply disruptions to Ford's manufacturing operations or increases in operating costs. In another example, in 2017, Capetown South Africa reached a critically low level in nearby dams. We assessed which of our suppliers are located in region, reached out to them to better understand their plans for continuity of supply. There were no supply issues resulting from the drought situation, but we continue to monitor the situation and encourage our suppliers in region to continue to find ways to minimize water use and maximize water recycling and reuse. We are not able to provide a quantitative assessment of the magnitude of impact at this time. However, based on data from the Thailand floods, the potential impact could be thousands of dollars per vehicle for lost production. Through the Partnership for A Cleaner Environment program, Ford is actively engaging suppliers to be more responsive to Climate Change issues such as CO2 emissions and extreme weather events such as droughts and floods
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	Ford established Water, waste, CO2 and energy efficiency strategies encompassing all Ford facilities. We developed our water strategy to prioritize addressing our water use, supplier water use and community water issues in water-stressed regions identified using the Global Water Tool, developed by the World Business Council for Sustainable Development (WBCSD). We are investing in water-saving technologies and process improvements across our global operations. Wherever feasible, we take successful projects and mirror them in other locations. Our newest plants use a set of advanced and environmentally friendly technologies to dramatically cut water use such as implementing membrane biological reactors (MBR) and reverse-osmosis processes to recycle water from our on-site wastewater treatment plants in arid regions, such as at plants in Chihuahua and Hermosillo, Mexico; Pretoria, South Africa; Chennai, India; and Chongqing, China. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This risk assessment is updated based on new data and takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes. Extreme weather has the potential to disrupt the production of natural gas, a fuel necessary for the manufacture of vehicles. Supply disruptions raise market rates and jeopardize the consistency of vehicle production. To minimize the risk of production interruptions, Ford has established firm delivery contracts with natural gas suppliers and installed propane tank farms at key manufacturing facilities as a source of backup fuel.
Investment in R&D	Impacted	Current and future regulations and the adoption of a 2 Degree Glidepath by Ford to stabilize global temperate rise have resulted in increased investment in global R&D to support EV implementation, light-weighting and other CO2 and Fuel economy initiatives For example, we announced an \$11B investment to add 40 new electrified vehicle (EV) solutions to our global portfolio by 2022 including 16 BEV and 24 PHEV and HEV. We have increased EcoBoost offerings to include more than 80 percent of our global nameplates. We have also invested in light-weighting through use of aluminum in our F-150 and Super Duty, and more recently in the Lincoln Navigator and Ford Expedition.
Operations	Impacted	We developed our water strategy to prioritize addressing our water use, supplier water use and community water issues in water-stressed regions identified using the Global Water Tool, developed by the World Business Council for Sustainable Development (WBCSD). We are investing in water-saving technologies and process improvements across our global operations. Wherever feasible, we take successful projects and mirror them in other locations. Our newest plants use a set of advanced and environmentally friendly technologies to dramatically cut water use such as implementing membrane biological reactors (MBR) and reverse-osmosis processes to recycle water from our on-site wastewater treatment plants in arid regions, such as at plants in Chihuahua and Hermosillo, Mexico; Pretoria, South Africa; Chennai, India; and Chongqing, China. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This risk assessment is updated based on new data and takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes. Extreme weather has the potential to disrupt the production of natural gas, a fuel necessary for the manufacture of vehicles. Supply disruptions raise market rates and jeopardize the consistency of vehicle production. To minimize the risk of production interruptions, Ford has established firm delivery contracts with natural gas suppliers and installed propane tank farms at key manufacturing facilities as a source of backup fuel.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Global regulations and requirements mandating the design, development and sale of electric vehicles and incorporating new materials and technologies to improve fuel economy affect expected earnings depending on the vehicle mix and the willingness of consumers to pay for technology implementation. Ford established a dedicated global team, Team Edison, to focus exclusively on creating an ecosystem of products and services for electric vehicles and the unique revenue opportunities that they provide with Regional applications. In the medium-term, our planning process includes bringing 40 electrified vehicles, 16 of them will be battery-only vehicles, to market by 2022. The electrified products include the F-150 Hybrid, Mustang Hybrid, Transit Custom plug-in hybrid, an autonomous vehicle hybrid, Ford Police Responder Hybrid and a fully-electric small SUV. A 1% increase in US sales results in a \$75M increase in revenue whereas a 0.5% increase in EU sales results in a \$1M increase in revenue. If a \$500 incentive is required to meet US regulatory obligations, it could result in a \$46.6M revenue decrease based on 2017 EV sales.
Operating costs	Impacted for some suppliers, facilities, or product lines	Climate change may affect the cost of materials, fuel, electricity and water. These effects may differ based on the location of the facility and the delivery distance for the materials or components. Actions taken to mitigate climate change such as water treatment facilities particularly in drought-prone areas or natural gas reserves may result in increased operating costs. In an effort to meet European regulatory requirements, actions have been taken to reduce CO2 emissions by 11% since 2013. For example, over \$1.3M was invested at manufacturing sites to install LED lighting fixtures reducing the overall electricity used at the site while also saving over \$325k in energy costs.
Capital expenditures / capital allocation	Impacted	As part of Ford's comprehensive view of its responsibility to improve fuel economy and reduce greenhouse gas emissions, Ford's planning process includes a \$11 billion investment in electrified vehicle solutions to put new electric vehicles on the road faster. As part of the effort to refocus on electrification, funding for traditional internal combustion engine development was re-allocated to EV powertrain development to support the additional vehicle programs. In addition, Ford established the Ford Smart Mobility LLC and Team Edison providing both personnel and resources to develop and implement strategies related to future mobility and electrified vehicle solutions. Ford established Water Usage and Energy Efficiency Strategies that include resources allocated for actions being taken at all facilities to improve overall efficiency of water and electricity usage.
Acquisitions and divestments	Impacted	Ford acquired interest in Argo AI, for \$1B over 5 years, Chariot (\$65M) and GoBikes to implement our Ford Smart Mobility Strategy to move from being a transportation company to positively impacting the way consumers and communities think about mobility. In addition, Ford signed a definitive Joint Venture agreement with Zotye to establish Zotye Ford Automobile Co Ltd, a new 50:50 joint venture that, pending government approval, will offer a range of stylish and affordable EVs for consumers in China. The new Joint Venture will develop and manufacture all-electric vehicles under a new Chinese brand.
Access to capital	Not yet impacted	Some financial investment firms have made available discreet pockets of money or have created funds specifically to finance socially responsible projects including projects related to climate change thereby increasing access to capital for some firms. Alternately, if climate change causes a significant or fast shift in customer preferences or if Ford is investing in products or technology customers don't accept, there could be a significant impact to profitability which could impact our access to capital.
Assets	Impacted for some suppliers, facilities, or product lines	Ford manages risk of climate change on our assets by evaluating on a regular basis the impact of acute and chronic climate and taking actions to ensure continued manufacturing capabilities for both suppliers and for Ford manufacturing. From a physical perspective, we assess risks and opportunities to our facilities at least annually. Extreme weather has the potential to disrupt the production of natural gas, a fuel we need to manufacture our vehicles. To minimize the risk, we have firm delivery contracts with natural gas suppliers and installed propane tank farms at key manufacturing facilities as a source of backup fuel. As an opportunity, we developed our water strategy to prioritize addressing our use, supplier use and community issues in water-stressed regions identified using the Global Water Tool, developed by the World Business Council for Sustainable Development. We are investing in water-saving technologies and process improvements across our global operations reducing operational costs while contributing to social welfare of the local community.
Liabilities	Not impacted	Ford does not anticipate climate change affecting our ability to meet our liabilities at this time as we were able to meet our liabilities through the previous downturn and we do not anticipate this changing in the future.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)
Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Ford's primary governance process (Creating Value Roadmap) integrates science based emission reduction targets into products and operations. Our Sustainability, Environmental & Safety Engineering organization is actively engaging with all organizations in the company to meet those targets at the lowest cost to the business. This year we updated our science-based emission-reduction goal of a 48% reduction in gCO₂/km (scope 3 use of sold products) by 2030 for our products by region based on stabilizing the atmospheric concentration, reflecting latest business and climate science assumptions, limiting global temperature increase to less than 2 degrees C, the level that many scientists, businesses and government agencies believe may avoid the most serious effects of climate change. In 2010, our mid-term Operational target for GHG/vehicle goal of 30% reduction in tCO₂/vehicle produced (scope 1+2) by 2025 was reached in 2017, 8 years early, and we are working to establish a new target. We work cooperatively with the public and private sectors to advance climate change solutions. Two recent substantial decisions demonstrate substantive impact to our product and business strategies. First, following on the success of the aluminum intensive F150, we transformed a second core product in response to regulatory requirements driven by climate change: When it came time to update the F 250/350, we redesigned the vehicle with major changes in design and materials that make it the toughest, smartest, most capable and fuel-efficient F-250/350 ever. "Closed loop" aluminum and seat fabric recycling processes significantly reduce life-cycle waste and greenhouse gas emissions. Increasing the amount of high-strength steel in the new F 250's frame and dramatically expanding the use of high-strength, military-grade, aluminum alloy in its body helped Ford engineers cut overall vehicle weight significantly. Second, Ford Smart Mobility, LLC was created due to changing consumer demand for low carbon transportation: To help shape a new future that answers the needs of cities and citizens, we've already started challenging the status quo by exploring new scenarios and what-ifs for transportation of the future. As part of our Ford Smart Mobility organization, we have created the City Solutions team to work with cities around the world, starting with San Francisco and growing from there. Chariot Shuttles and Ford GoBikes are two of the solutions we have launched. We envision a future in which vehicles can communicate with one another to warn of traffic or infrastructure delays so the driver can take another route, saving time and reducing congestion; where vehicles sense each other's presence, helping to avert accidents and improve safety; and where people routinely share vehicles and use multiple forms of transportation, enabled through more and better information. The future requires developing the flexibility and capability to market lower-GHG-emission products, in line with evolving market conditions; and working with industry partners, energy companies, consumer groups and policy makers to establish an effective and predictable market, policy and technological framework for reducing GHG emissions. Investors are showing greater concern about climate change as a material risk for many companies. A variety of voluntary public registries and information services are providing information to investors about greenhouse gas emissions, while in some countries, companies are required to disclose information about their climate risks. We assess the risks each of our facilities faces (with input from third-party engineers) at least annually. This takes into account the risk of exposure to hurricanes, tornadoes, other storms, flooding and earthquakes. As a result, we believe we have a good understanding of the physical risks faced by our facilities and how those risks are changing over time. Extreme weather has the potential to disrupt the production of natural gas, a fuel necessary for the manufacture of vehicles. To minimize production interruptions, we have established firm delivery contracts with natural gas suppliers and installed propane tank farms at key manufacturing facilities as a source of backup fuel. Higher utility rates have prompted Ford to revisit and implement energy-efficiency actions that previously did not meet our internal rate of return. Our suppliers, located in more than 60 countries, are subject to market, regulatory and physical risks as a result of greenhouse gas regulation and the impacts of climate change and could affect their competitiveness or ability to operate, creating the potential for disruptions to the flow of supplies to Ford. Short term product strategies have been influenced by climate change. Near term competitive advantage is achieved by offering our customers a portfolio of products that provide fuel efficient or low carbon transportation. We continue to pursue opportunities to further improve vehicles with conventional gasoline and diesel powertrains. We are implementing a range of advanced engine and transmission technologies as well as improving aerodynamics and reducing weight. Alternative fuels and powertrains are playing a growing role in reducing carbon emissions. Ford announced in December 2016 that we are investing an additional \$11 billion in electrified vehicle solutions by 2022, including 40 new electrified vehicles. More than 40% of the company's global nameplates be electrified by 2020. Long term product strategies have been influenced by climate change. Ford has established science based targets for both products and facilities aligned with limiting the impacts of climate change long term. These targets are directly linked to technologies and Ford Smart Mobility to deliver low carbon transportation solutions in the future. By implementing an ambitious plan of vehicle technology, alternative powertrain and fuel actions, we are improving fuel economy and reducing CO₂ emissions across our products via our Global Technology Migration Path for CO₂ Reduction in the now (2020), near (2025) and far (2030+) terms (<http://corporate.ford.com/microsites/sustainability-report-2017-18/strategy-governance/strategy/climate.html>). Climate change is shaping the way we do business and creates a strategic advantage. We are expanding our business model to be both an auto and a mobility company. Our strategy involves continually strengthening and investing in our core automotive business, while aggressively pursuing new emerging opportunities through Ford Smart Mobility – our plan to be a leader in connectivity, mobility, autonomous vehicles, the customer experience, and data and analytics. Addressing the risks and effects of global warming is of paramount importance to Ford, and it's not just in our manufacturing facilities where we are working to reduce our footprint and create a better world.

C3.1d

(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenarios	Details
2DS	<p>Boundaries and time horizons: Our 2DS scenario models 11 global regions over the years 2000 to 2050. From the model we extract results for the four major regions where we do business (North America, the EU, China and South America) over the near-term (5 years) to mid-term (15 years), currently from 2015 to 2030. Methodology: Since 2007, Ford has created CO2 glide paths describing the average g CO2/km tank-to-wheel (TTW) emissions our new light-duty vehicles must achieve to stabilize atmospheric CO2 and temperature change. We published our methodology in 2014 (dx.doi.org/10.1021/es405651p Environ. Sci. Technol. 2014, 48, 6453–6460). The methodology has evolved over time. Currently we use the IEA ETP 2DS light-road CO2 pathway to determine the rate of CO2 reduction needed. We have updated the WBCSD SMP model to calculate global (11 world regions) LDV CO2 from 2000-2050, based on inputs of LDV sales forecasts (internal and IHS), vehicle turnover rates, on-road vs. test-cycle emissions (ICCT), km travelled, vehicle efficiency (L/100 km), and diesel vehicle sales shares. We assume biofuel availability is constant at 2015 levels. Every 5 years we update historical data to ensure that cumulative CO2 emissions are accurately counted. Given the fleet emission forecast based on the above data, we calculate the annual improvement in new vehicle TTW efficiency that is needed to keep the well-to-wheels CO2 below the CO2 cap prescribed by the 2DS scenario. The scenario output is gCO2/km TTW targets for our future new vehicle fleets in North America, the EU, China and South America that support 2-degree temperature change stabilization. Results and Outcomes: The scenario analysis indicates the new LDV fleet tailpipe CO2 reductions needed to contribute to 2 degree stabilization. The 2DS targets provide a mid-term outlook for CO2 emissions, beyond where regulations end. Regional targets for approximately the next 15 years (currently to 2030) are approved at the Global Sustainability Meeting (GSM, a monthly VP-level forum) and cascaded to the regional engineering teams for vehicle planning, including both conventional internal combustion vehicles and increasing volume of electrified vehicles. Internal reporting and monitoring: Alignment of the mid-term vehicle cycle plans with the 2DS CO2 glide path is assessed at least annually by a cross-functional team from Sustainability and Vehicle Environmental Engineering (SE&SE), Research & Advanced Engineering, and Product Development. The alignment status is reported at the GSM. The Group Vice President of SE&SE is responsible for the 2DS CO2 glide path assessment corporate metric. The 2DS targets are monitored, with annual reviews. When external conditions (e.g. economic downturns, technology breakthroughs) may appear to affect key inputs (sales, vehicle efficiency, biofuel supply), the model is updated, the 2DS targets are recalculated, and the vehicle plans are reassessed against the updated targets. Case study: The 2DS targets are crucial for mid-term to long-term planning. We use the continuously declining 2DS CO2 glide path to determine the CO2 intensity of our future fleet. We study the mix of vehicle powertrain types that are needed to achieve the 2-degree targets. We will have hybrid, plug-in hybrid electric, and battery electric vehicles across many vehicle lines. Ford’s business plan to invest \$11 billion in electrification of the vehicle fleet will go a long way toward meeting the 2 degree CO2 glide path. External reporting: We have reported our CO2 glide path methodology publicly in our Corporate Sustainability Report for many years. In our CDP submission we report emissions intensity reduction targets for scope 3 use of sold products targets based on our 2DS scenario analysis.</p>
RCP 2.6	<p>RCP2.6 scenario represents a stretch goal of the 2015 Paris Accord for a 1.5 deg stabilization. It is used to understand the relative stringency of 1.5 degrees compared to our 2 degree (2DS) scenario. Both scenarios use the same model, but with different CO2 emission limits. Boundaries and time horizons: RCP2.6 models 11 global regions over the years 2000 to 2100. This is a longer time horizon than the 2DS scenario to capture the 2070 time frame where the CO2 emissions become negative. From the model we extract results for the four major regions where we do business (NAM, EU, China & SAM) over the near- (5 yrs), mid- (15 yrs) & very long-term (50+ yrs). Methodology: Since 2007, Ford has created CO2 glide paths describing the avg g CO2/km tank-to-wheel (TTW) emissions our light-duty vehicles must achieve to stabilize atmospheric CO2 and temp change. We published our methodology in 2014 (dx.doi.org/10.1021/es405651p Environ. Sci. Technol. 2014, 48, 6453–6460). For 1.5 degs, we use IPCC RCP2.6 global, all-sector CO2 pathway to determine the rate of CO2 reduction needed. Since our last update, IEA ETP has developed beyond 2DS which has a light-road pathway. We updated the WBCSD SMP model to calculate global (11 world regions) LDV CO2 from 2000-2050, based on inputs of LDV sales forecasts (internal and IHS), vehicle turnover rates, on-road vs. test-cycle emissions (ICCT), km travelled, vehicle efficiency, and diesel vehicle sales shares. We assume biofuel availability constant at 2015 levels. Every 5 yrs we update historical data to ensure cumulative CO2 emissions are accurately counted. Given fleet emission forecast based on the above data, we calculate the annual improvement in new vehicle TTW efficiency needed to keep the well-to-wheels CO2 below the CO2 cap prescribed by the RCP2.6 scenario. The scenario output is gCO2/km TTW targets for our future new vehicle fleets in NAM, EU, China and SAM that support 1.5-degree temp change stabilization. Results and Outcomes: The RCP2.6 (1.5 degree) scenario requires more long-term CO2 reduction than the 2DS scenario. Annual gCO2/km reductions are 50-60% greater than the 2DS scenario. The RCP2.6 targets provide a mid-term outlook for CO2 emissions, beyond where regulations end. Internal reporting and monitoring: Internally, we report and assess progress towards 2DS. RCP2.6 is used as a sensitivity scenario. Alignment of the mid-term vehicle cycle plans with the 2DS CO2 glide path is assessed at least annually by a cross-functional team from Sustainability, Env & Safety Eng (SE&SE), Research & Advanced Eng, and Product Development. The alignment status is reported at the Global Sustainability Mtg. The Group VP SE&SE is responsible for the Corp 2DS CO2 glide path assessment metric. The 2DS targets are monitored with annual reviews. Should external conditions (e.g. economic incentives, technology breakthroughs) appear to affect key inputs supporting RCP2.6 scenario (BEV sales, vehicle efficiency, renewable energy supply), the model can be updated, the RCP2.6 targets can be recalculated, and the vehicle plans can be reassessed against the updated targets. Case study: The 1.5 deg scenario shows that the scenario cannot be satisfied with vehicle actions alone. The vehicle efficiency (TTW) gCO2/km reduction must be supported by low-carbon energy (WTT). The drastic reductions in CO2 that are needed require an immediate & growing shift to renewable or low carbon energy. Since energy supply is outside our immediate control we are engaging in university and government research to support system-wide understanding of future vehicle/fuel systems (e.g. USDRIVE Cradle to Grave (C2G), European JRC WTW Study) and encouraging system-wide thinking. External reporting: We report our CO2 glide path methodology publicly in our Corporate Sustainability Report disclosing that we evaluate to a 1.5 degree sensitivity scenario.</p>

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e)
Disclose details of your organization's low-carbon transition plan.

The Ford low-carbon transition plan includes elements for Products and Services as well as our Facilities and Manufacturing footprint. By implementing an ambitious plan of vehicle technology, alternative powertrain and fuel actions, we are improving fuel economy and reducing CO2 emissions across our products via our Global Technology Migration Path for CO2 Reduction in the near (2020), mid (2025) and long (2030+) terms (<https://corporate.ford.com/microsites/sustainability-report-2017-18/customers-products/reducing-emissions/index.html>). Climate change is shaping the way we do business and creates a strategic advantage. We are expanding our business model to be both an auto and a mobility company. Our strategy involves continually strengthening and investing in our core automotive business, while aggressively pursuing new emerging opportunities through Ford Smart Mobility – our plan to be a leader in connectivity, mobility, autonomous vehicles, the customer experience, and data and analytics. Addressing the risks and effects of global warming is of paramount importance to Ford, and it's not just in our manufacturing facilities where we are working to reduce our footprint and create a better world. Our science-based global strategy aims to reduce the greenhouse gas (GHG) emissions from our vehicles (as well as our operational processes). Encompassing our Sustainable Technologies and Alternative Fuels Plan, the strategy seeks to deliver high-quality products that meet consumer demand while also responding to the risks presented by climate change. We use a variety of approaches to improve the fuel economy of our gasoline- and diesel-powered vehicles, guided by our Sustainable Technologies and Alternative Fuels Plan. Improving fuel economy goes hand-in-hand with our work on electrification. Our plan to develop sustainable technologies and alternative fuels includes researching and developing alternative powertrains and fuel options across all our vehicles, delivering on our promise to give customers the power of choice. Ford is investing \$11B in our global electrification programs to develop 40 EVs (16 BEV and 24 PHEV and HEV) to be launched by 2022. Significant efforts have also been made to establish and implement Energy Use, Greenhouse Gas Emissions, Water Use and Waste Reductions Strategies at all Ford locations. Best practices are shared with selected suppliers through the Partnership for A Cleaner Environment (PACE) program to encourage suppliers to set targets and take similar actions. Our Energy Management Operating System (EMOS) is a comprehensive approach focusing on facility improvements, data management and the supply of energy to our manufacturing plants. We met our global goal of a 30% reduction in GHG emissions per vehicle produced between 2010 and 2025 in 2017, eight years ahead of schedule. We met our goal in 2015 to reduce facility energy consumption on a per-vehicle basis by 25% compared to 2011. With activities coordinated regionally, our Material Planning and Logistics (MP&L) organization is responsible for designing and operating our global transportation networks, and devising high-quality and efficient packaging to protect materials in transit. Understanding, quantifying and reporting our freight emissions helps us understand our overall environmental impacts, and prioritize ways to minimize our total life cycle carbon footprint. We work closely with our logistics partners to collect data from across our networks and collate it in a global performance scorecard. Freight emissions are influenced by a wide range of interrelated factors, including the mode of transport, the efficiency of the equipment used and the design of the freight network. We seek to achieve emissions reductions through Improving Freight Efficiency, Best Practice Technologies and Alternative Transport Modes.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Scope

Scope 1+2 (location-based)

% emissions in Scope

100

% reduction from baseline year

30

Metric

Metric tons CO2e per unit of production

Base year

2010

Start year

2010

Normalized baseline year emissions covered by target (metric tons CO2e)

0.99

Target year

2025

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

% achieved (emissions)

100

Target status

Underway

Please explain

The goal was set in 2010, aiming to reduce the company's global carbon dioxide emissions from manufacturing operations by 30 percent per vehicle produced by 2025. Ford achieved that goal in 2017, eight years ahead of schedule. A new goal is currently under development using science-based methodology and 2DS.

% change anticipated in absolute Scope 1+2 emissions

30

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 2

Scope

Scope 3: Use of sold products

% emissions in Scope

70

% reduction from baseline year

48

Metric

Grams CO2e per kilometer*

Base year

2010

Start year

2012

Normalized baseline year emissions covered by target (metric tons CO2e)

174

Target year

2030

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

% achieved (emissions)

11

Target status

Underway

Please explain

We published our science-based targets methodology in 2014 (dx.doi.org/10.1021/es405651p | Environ. Sci. Technol. 2014, 48, 6453–6460). Absolute emissions reductions are dependent on unknown future sales volumes. We have assumed the same future regional sales shares as 2010 giving the same percent reduction in absolute and intensity targets. While Ford's product development plans are based upon delivering these long-term reductions in CO2 emissions, we anticipate that the year-over-year reductions will vary somewhat. In some years the reductions will be greater and in other years they will be less. That is because delivering on these targets will be dependent to some degree on market forces that we do not fully control (e.g., changes in energy prices and changes in the mix of vehicles demanded by the consumers in the markets in which we operate). Furthermore, our product strategy is based on multiple inputs, including regulatory requirements, competitive actions and technology plans.

% change anticipated in absolute Scope 1+2 emissions

0

% change anticipated in absolute Scope 3 emissions

-48

C4.2**(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.****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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	1	5112
Implementation commenced*	4	30335
Implemented*	6	24848
Not to be implemented	0	0

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

Energy efficiency: Building services

Description of activity

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

27461

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

3400000

Investment required (unit currency – as specified in CC0.4)

15010000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

LED Lighting - Multiple Locations

Activity type

Energy efficiency: Building services

Description of activity

Other, please specify (Steam System Conversion)

Estimated annual CO2e savings (metric tonnes CO2e)

7338

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

1770000

Investment required (unit currency – as specified in CC0.4)

6980000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Steam System Conversion

Activity type

Energy efficiency: Processes

Description of activity

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

14890

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

2000000

Investment required (unit currency – as specified in CC0.4)

8600000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Paint system optimization

Activity type

Energy efficiency: Processes

Description of activity

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

5182

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

2000000

Investment required (unit currency – as specified in CC0.4)

8600000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Paint system optimization

C4.3c

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

Method	Comment
Other	In North America, Ford continues to use energy performance contracting as a financing tool to upgrade and replace infrastructure at its plants, commercial buildings and research facilities. Through these contracts, Ford partners with suppliers to replace inefficient equipment, funding the capital investment over time through energy savings. Projects have been implemented to upgrade lighting systems, paint-booth process equipment and compressed air systems, and to significantly reduce the use of steam in Ford's manufacturing facilities.
Partnering with governments on technology development	In 2013, Ford joined the U.S. Department of Energy's (DOE) Better Buildings, Better Plants program, a national partnership initiative to drive a 25 percent reduction in industrial energy intensity in 10 years against a 2011 baseline. Twenty four of Ford's U.S. plants are part of this initiative.
Dedicated budget for low-carbon product R&D	For the past eight years, Ford has been following an ambitious plan of vehicle technology and alternative powertrain and fuel actions. By implementing this consistently, we are improving fuel economy and reducing CO2 emissions across our product portfolio, and working toward a more sustainable future. Our Global Technology Migration Path for CO2 Reduction detailing near, mid and long-term actions is available at http://corporate.ford.com/microsites/sustainability-report-2017-18/customers-products/emissions/index.html
Partnering with governments on technology development	Ford has developed a Paint Emissions Concentrator (PEC) technology which uses a fluidized bed adsorber, coupled with desorption and condensation equipment to collect and concentrate solvent emissions into a liquid. The intent of the technology is to collect a portion of the VOCs from the spraybooth exhaust, super-concentrate them in the PEC, then condense and store them on-site for possible use as a fuel or recycle back to the production process. In this way, overall VOC emissions from the paintshop are reduced. Ford is currently working to optimize this technology at our Oakville facility. Ford's PEC technology has the potential to reduce CO emissions by 20 – 50% compared to traditional abatement equipment. Also, PEC technology, combined with recycle of the collected solvents has the potential to eliminate nitrogen oxide emissions compared to conventional abatement approaches which involve the oxidation of solvents. Ford is currently working to optimize adsorbent performance and recycle of collected solvents back to the production process.
Compliance with regulatory requirements/standards	Investments in our products can be driven by environmental regulatory requirements. It is Ford's policy to comply with all environmental regulations, so regardless of cost, we will find a way to comply. For example, regulatory requirements have driven vehicle improvements such as light-weighting or the introduction of the EcoBoost engine.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products

Description of product/Group of products

Hybrid electric vehicles and plug-in hybrid electric vehicles

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

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify (Internal calculation)

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

1.5

Comment

HEVs and PHEVs provided lower fuel consumption resulting in reduced CO2 emissions. In the US, for example, Fusion Hybrids and Fusion Energis (PHEV) using US average electricity have saved over 2.2 million tonnes of CO2 compared to a conventional 2.5L Fusion since 2009. We engage in engineering, research, and development primarily to improve the performance (including fuel efficiency), safety, and customer satisfaction of our products, and to develop new products and services (including for emerging opportunities). Engineering, research, and development expenses for 2014, 2015, 2016, and 2017 were \$6.7 billion, \$6.7 billion, \$7.3 billion, and \$8 billion, respectively.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

1641944

Comment

Ford has met its 2025 in 2017 target with 2010 as a base year.

Scope 2 (location-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

3590736

Comment

Ford has met its 2025 target in 2017 with 2010 as a base year.

Scope 2 (market-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

3590736

Comment

Ford has met its 2025 target in 2017 with 2010 as a base year.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

ISO 14064-1

Programa GEI Mexico

The Climate Registry: General Reporting Protocol

US EPA Mandatory Greenhouse Gas Reporting Rule

Other, please specify (As required by regulation or requirement)

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

ISO 14064-1, programa GEI Mexico, The Climate Registry: General Reporting Protocol, US EPA Mandatory Greenhouse Gas Reporting Rule, Australia - National Greenhouse and Energy Reporting Act Brazil GHG Protocol Programme Programa GEI Mexico The Climate Registry: General Reporting Protocol US EPA Mandatory Greenhouse Gas Reporting Rule The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), Ontario's GHG Emissions Reporting Regulation, Ontario Regulation 452/09

C6. Emissions data

C6.1

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

Row 1

Gross global Scope 1 emissions (metric tons CO2e)

1391127

End-year of reporting period

<Not Applicable>

Comment

Ford implemented an updated methodology in the 2017 emissions year data, by using updated IEA emission factors for all locations outside the United States. For locations in the US, Ford used the USEPA emission factors. Ford also added additional Scope 1 and Scope 2 data through a comprehensive global office building inventory.

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

Ford implemented an updated methodology in the 2017 emissions year data, by using updated IEA emission factors for all locations outside the United States. For locations in the US, Ford used the USEPA emission factors. Ford also added additional Scope 1 and Scope 2 data through a comprehensive global office building inventory.

C6.3

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

Row 1

Scope 2, location-based

3482444

Scope 2, market-based (if applicable)

3359908

End-year of reporting period

<Not Applicable>

Comment

Ford implemented an updated methodology in the 2017 emissions year data, by using updated IEA emission factors for all locations outside the United States. For locations in the US, Ford used the USEPA emission factors. Ford also added additional Scope 1 and Scope 2 data through a complete global office building inventory

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?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Equipment and Vehicle Testing Fuels (at various manufacturing sites): Small amounts of gasoline, diesel, and propane combustion for vehicle testing, emergency equipment operation, onsite vehicles, small space heating, and other applications at manufacturing sites and vehicle testing sites.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why the source is excluded

Compared to our Scope 1 and Scope 2 Reported Emissions, the GHG Emissions from this fuel group were estimated to be about 1.80% the size of our reported emissions.

Source

Refrigerant Leakage from refrigeration equipment at manufacturing sites and large research sites.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why the source is excluded

Compared to our Scope 1 and Scope 2 Reported Emissions, the GWP impact from refrigerant leakages at manufacturing sites and large research sites was estimated to be about 1.07% the size of our reported emissions.

Source

Refrigerant Leakage occurring during vehicle A/C system charging at Assembly Plants.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why the source is excluded

Compared to our Scope 1 and Scope 2 Reported Emissions, the GWP impact from refrigerant leakages occurring during vehicle A/C system charging at assembly plants was estimated to be about 0.59% the size of our reported emissions. As the automotive industry transitions to using refrigerant 1234yf for vehicle A/C systems, we expect the GWP impact from this category of emissions to fall below 0.01%.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

42178358

Emissions calculation methodology

Emissions for purchased goods and services are estimated using a combination of primary and secondary data. Primary data from suppliers who reported validated Scope 1, 2, and 3 emissions (in categories 1, 4, and 5) to Ford through the CDP Supply Chain climate change questionnaire was considered reliable for this analysis. However, this accounted for only about 14% of total spend. Therefore, for our estimate to be representative of 100% spend in this category, we relied on secondary data for scale-up. This was accomplished using an average carbon intensity metric (metric tonnes CO₂e/\$) for all GRI Business Activity Groups multiplied by spend not already accounted for by primary data. Please note that CO₂ emissions from suppliers of upstream transportation are not included in this category to avoid double counting.

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

14

Explanation

Based on the methodology used, the value is 20% of our total Scope 3 emissions and therefore determined to be relevant. In 2017, Ford asked approximately 250 selected production and indirect suppliers to report their greenhouse gas emissions and management through CDP Supply Chain's climate change questionnaire and about 200 responded. However, only the supplier data, which had been independently verified, was considered reliable. These suppliers represent about 14% of spend on purchased goods and services. Therefore, industry-level carbon emissions intensities from GRI Business Activity Groups are used to scale-up the estimated Scope 3 emissions for this category. As we continue to increase the quantity and quality of supplier-reported data, we will revise these estimates

Capital goods

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

1048894

Emissions calculation methodology

Emissions for capital goods are estimated using a combination of primary and secondary data. Primary data from suppliers who reported validated Scope 1, 2, and 3 emissions (in categories 1, 4, and 5) to Ford through the CDP Supply Chain climate change questionnaire was considered reliable for this analysis. However, this accounted for only about 11% of total capital goods purchases. Therefore, for our estimate to be representative of 100% spend in this category, we relied on secondary data for scale-up. This was accomplished using an average carbon intensity metric (metric tonnes CO₂e/\$) for all GRI Business Activity Groups multiplied by spend not already accounted for by primary data.

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

11

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. In 2017, Ford asked approximately 250 selected production and indirect suppliers to report their greenhouse gas emissions and management through CDP Supply Chain's climate change questionnaire and about 200 responded. However, only the data from capital goods suppliers, which had been independently verified, was used as the primary data. These suppliers represent about 11% of spend on capital goods. Therefore, industry-level carbon intensities are used to scale-up the estimated Scope 3 emissions for this category. As we continue to increase the quantity and quality of supplier-reported data, we will revise these estimates.

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

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1100000

Emissions calculation methodology

Following the GHG protocol, we identified upstream emission factors and applied them to our scope 1 and scope 2 energy consumption. The energy was itemized by fuel type or electricity and represents both our manufacturing facilities and non-manufacturing locations globally. The upstream emission factors for fuels and purchased electricity are obtained from the latest version of Argonne National Lab's GREET 2017 model. Electricity T&D loss rates are from the World Bank database recommended by the GHG protocol.

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

0

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

2433990

Emissions calculation methodology

Our calculation methods are aligned to the Greenhouse Gas Protocol and to EN 16258 and similar initiatives. Our standardized approach calculates CO2e emissions for each of our freight networks. For analysis we then divide the figures by the number of vehicles we have manufactured using the parts and other material transported on these networks. This allows us to compare the relative performance for different vehicle programs and against year on year improvement targets. We base our calculations on secondary data of distance travelled, loading etc. provided by our logistics service providers and use detailed emissions factors from internationally recognized bodies appropriate to the transport mode. Where possible, we update these factors with data with average fuel economy from our carriers. For rail and ocean, we get usage data direct from our freight operators. We here consider our freight in two categories: 1) Inbound freight from our parts suppliers to our manufacturing & assembly plants The inbound freight network is generally on a collect basis using contracted carriers paid by us. For reporting purposes, we include all emissions from collected tier 1 suppliers to our manufacturing sites as well as an allowance for transport of empty packaging back to our supply base. This includes road, rail and ocean modes. We consider freight emissions from suppliers upstream of our tier 1 suppliers to be covered within their own scope 3 submissions. Our outbound data considers transport from factory gate to handover to dealer. 2) Transport of finished vehicles from our manufacturing & assembly plants to our dealers This freight is generally using dedicated car carrying equipment carried out by contracted carriers and paid for by us. In many regions we have the same Lead Logistics Providers supporting both inbound and finished vehicles which helps ensure consistency of approach in CO2 reporting. To produce global data, we have used our calculated CO2e per unit figures for appropriate networks and multiplied these figure against vehicles produced in each region. We have added a 10% contingency to allow for other elements of freight not covered in the main calculations including premium freight. Note: Inbound= 1569079 Metric Tonnes CO2e Finished vehicle= 864911 Metric Tonnes CO2e

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

0

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant Ford carries out comprehensive CO2 emissions reporting for all our major upstream freight networks. We use a standardized approach and procedures that we originated back in 2006. Over subsequent years we have expanded the coverage to include all regions and developed the calculation processes in line with industry best practices. From 2011, we began reporting CO2e figures to take account of emissions of other greenhouse gases including N2O and Methane. The great majority of greenhouse gas emissions from our transportation and distribution operations consists of CO2 exhaust emissions from our transport. We have a clear policy to measure & reduce our CO2 emissions as part of our functional business plan. Our corporate business policies include specific objectives on monitoring freight CO2 emissions, reducing fleet fuel usage, improving average fleet emissions levels, improving freight utilization and carrying out business case studies to improve the % usage of green routes. Activities that directly reduce our reported emissions include network redesign, use of alternative fuels and lubricants, use of aerodynamics and driver training. We recognize that work on reducing CO2 emissions has additional benefits in reducing levels of other pollutants and reducing volumes of heavy goods traffic. In some locations we use truck fleets owned and directly controlled by ourselves. In these cases we are able to monitor fuel usage in detail and apply best practices to improve our operational efficiency as recognized by appropriate authorities such as EPA SmartWay and the Freight Transport Association (in the UK). Our reporting processes are aligned to the GHG Protocol and the recently published European Standard EN 16258 We work pro-actively with industry bodies (such as the AIAG) to promote best practice in freight GHG reporting. In Europe we were lead writer within the initiative by Odette to publish standard guidelines for freight GHG emissions reporting for the Automotive Sector.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

127979

Emissions calculation methodology

In order to estimate scope 3 emissions from waste generated at Ford's facilities, the US EPA WARM model Version 14 was used

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

0

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. This is a very small element in our overall GHG footprint. We are continuing to reduce the amount of waste sent to landfill every year through our Global Waste Strategy. 87 Ford manufacturing and non-manufacturing facilities sends zero waste to landfill. Of particular note is the closed loop aluminum recycling process used in the production of Ford's trucks. As the scrap aluminum goes directly from a Ford facility to the supplier, it is not included in the calculations here. Ford recycles as much as 20 million pounds of aluminum stamping scrap per month using the closed-loop system at Dearborn Stamping Plant, which provides parts to build F-150 at Ford's Dearborn Truck and Kansas City Assembly Plants. Recycled aluminum avoids 95 percent of the greenhouse gas emissions associated with primary aluminum production. It uses significantly less energy and water also.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

55976

Emissions calculation methodology

Ford utilized total GLOBAL booked air, rail and rental car miles traveled for 2017 and applied emission factors based on the methodology provided in Section 2.2 and Section 2.4 of the USEPA guidance document noted below. Ford utilized the guidance document provided by the USEPA and recommended by The Climate Registry located at:

http://www.epa.gov/climateleadership/documents/resources/commute_travel_product.pdf Document title: USEPA, Climate Leaders Greenhouse Gas Inventory Protocol Core Module Guidance, Optional Emissions from Commuting, Business Travel and Product Transport (EPA430-R-08-006). Air Travel: 53,047 Rail Travel: 335 Car: 2,594

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

100

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. Though this is a very small element in our overall GHG footprint, we are reducing employee travel and commuting emissions in a number of ways, including allowing telecommuting, encouraging virtual meetings, and facilitating employee's use of electric vehicles by offering on-site vehicle charging at many facilities. Relevance may change with better understanding of all scope 3 emissions.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

104840

Emissions calculation methodology

The US EPA small business GHG emissions tool was used to calculate GHG emissions from employee commuting. Validated the employee commute distances by analyzing US base hourly and salary employees zip code data for yearend 2017. Also we determined through various surveys that 84% of employees drive Ford/Lincoln vehicles and removed that volume from this category because it is captured in the "use of sold products". This remaining value represents the 16% of company employees who do not drive Ford/Lincoln.

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

0

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. Though this is a very small element in our overall GHG footprint, we are reducing employee travel and commuting emissions in a number of ways, including allowing telecommuting, encouraging virtual meetings, and facilitating employees' use of electric vehicles by offering on-site vehicle charging at many facilities. Relevance may change with better understanding of all scope 3 emissions.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Leased assets are included in Scope 1 and Scope 2 calculations

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Not relevant Data included in this category in prior years now included under category 4

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

Explanation

Transport of finished product (vehicles) to our retail network (dealerships) is carried out using freight that we pay for and control. Based on our understanding of GHG Protocol Scope 3 Category definitions we have therefore included these emissions within Category 4- Upstream Transportation.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

6.5% of our US vehicle production volume are Incomplete vehicles. An incomplete vehicle consists of at a minimum a chassis and powertrain and often includes some front body. The CO2 intensive processing for incomplete vehicles is captured in the Scope 1 and Scope 2 operational control.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

161400000

Emissions calculation methodology

2017 sales and gCO2/km emissions data for cars and light commercial vehicles was collected for US, EU, China, Canada, Mexico, Brazil, Australia and India. These regions represent about 87% of all vehicles sold in 2017. The fleet average sales-weighted tailpipe gCO2/km was calculated. Assuming 150,000 km lifetime, the total CO2 emissions of the 2017 fleet were calculated.

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

0

Explanation

Based on the methodology used, the value is 76% of our total Scope 3 emissions and therefore determined to be relevant. The CO2 emissions represent the lifetime tailpipe (TTW) CO2 from passenger cars and light commercial vehicles sold in 2017. This calculation includes about 87% of total sales. U.S. medium-heavy duty trucks were included for the first time in this calculation in 2017. Without U.S. MHDT, the CO2 is 133 Mt.

End of life treatment of sold products

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1400000

Emissions calculation methodology

We used a vehicle disposal factor of 238 kg CO2e/vehicle or 0.165 kg CO2eq/kg from GREET2017. We applied the factor to 2017 sales data for cars and light commercial vehicles in the U.S., EU, China, Canada, Mexico, Brazil, Australia and India. These regions represent about 87% of all vehicles sold in 2017. The U.S. calculation was based on vehicle mass using the per kg disposal factor. All other regions used the per vehicle disposal factor.

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

0

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. The emissions from the ELV stage are considered in all Ford LCA activities. From those and other auto industry studies (e.g. Life Cycle Assessment of Lightweight and End-of-Life Scenarios for Generic Compact Class Passenger Vehicles) we have learned that the environmental impact of the ELV stage accounts for 1-3% throughout the entire life cycle. In addition, they depend very much on the local conditions of the ELV treatment operators on which Ford has no influence. These learnings are influencing our decisions to set the right emphasis on the different areas of our sustainability strategy."

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

A downstream leased asset would be a Ford owned facility that we lease some or all to non-Ford tenants. The combined emissions for those facilities would be less than 5% of overall emissions.

Franchises

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1957800

Emissions calculation methodology

Ford's U.S. dealerships were comprehensively analyzed, and based on their utility usage, an annual average GHG footprint of 600 metric tons CO2e per dealership was determined. This emission factor was applied across the 3263 number of United States dealerships, to arrive at the reported cumulative emissions. However, this emission factor is not representative of worldwide Ford dealerships. Owing to substantial variability in global dealership footprint and corresponding utility use (based on region-specific weather), it is reasonable to not extrapolate emissions across the entirety of Ford's dealership base. Going forward, we shall try and understand region-specific dealership carbon footprints, and build on the presently reported figure. As an emissions reduction initiative, the Ford Go Green Dealership Program was developed and offered to dealerships throughout the United States. Over 1600 dealerships participated representing approximately 50% of the total national dealership body. Detailed assessments were prepared for each participating dealership identifying specific utility upgrades that, if implemented, would result in energy savings for the dealership. An average dealership can save \$35,000 in energy cost by implementing the recommendations of the assessment which could result in a carbon footprint reduction of 210 metric tons of carbon dioxide per year. Through mid-2018, approximately 20% of dealerships implemented on average 60% of the recommendations. The total annual carbon footprint reduction calculates to be 40,000 metric tons for the energy improvements made by dealership through this date. As more dealership implement similar improvements, the annual carbon footprint reduction could ultimately grow to 100,000 metric tons per year if 50% of these dealerships make upgrades.

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

100

Explanation

Based on the methodology used, the value is less than the 5% threshold of relevancy established compared to the total of Scope 3 emissions and therefore determined to be not relevant. We have completed the assessments performed as part of the "Go Green" Dealer Sustainability Program we launched in 2010. The program addressed efficiency improvements and cost savings at dealerships in the areas of lighting, HVAC, building envelope, water use and renewable energy applications. Each participating dealership received a Go Green Assessment identifying opportunities to increase their utility efficiencies, lower their energy costs and reduce their carbon footprints. As of the mid-2018, nearly half of our 3,263 U.S. dealers had completed these assessments as part of the electric vehicle (EV) and "Trustmark" programs. These assessment reports identified that the average dealership has the opportunity to reduce their energy consumption by 25 percent, resulting in an annual savings of \$35,000 with a payback of 4 years. Upgrading lighting systems is specifically attractive and may have paybacks of one year. Ford Land has developed a listing of recommended lighting fixtures available to dealerships at Ford preferential pricing. This data is available to dealerships for their use in upgrading their lighting systems so that they can achieve quality lighting at preferred pricing and achieve excellent returns on their investments.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Compared to vehicle use phase and other, larger scale categories this is small impact. Relevance may change with better understanding of all scope 3 emissions.

Other (upstream)

Evaluation status

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Other (downstream)

Evaluation status

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

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

0.0000334

Metric numerator (Gross global combined Scope 1 and 2 emissions)

4873571

Metric denominator

unit total revenue

Metric denominator: Unit total

145700000000

Scope 2 figure used

Location-based

% change from previous year

0

Direction of change

No change

Reason for change

This is the first year reporting a total gross scope 1+2 emissions with the addition of non-manufacturing locations (global office buildings) to the gross scope 1 + scope 2 totals in 2017

Intensity figure

0.74

Metric numerator (Gross global combined Scope 1 and 2 emissions)

4873571

Metric denominator

vehicle produced

Metric denominator: Unit total

6602888

Scope 2 figure used

Location-based

% change from previous year

0

Direction of change

No change

Reason for change

This is the first year reporting a total gross scope 1+2 emissions with the addition of non-manufacturing locations (global office buildings) to the gross scope 1 + scope 2 totals in 2017

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	1388887	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	801	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	1439	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
North America	904352
Europe	287596
Asia, Australasia	126844
South America	47822
Africa and Middle East	24513

C7.3

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

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Manufacturing Operations	1183281
Non-Manufacturing Operations	207845

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	1183281	<Not Applicable>	
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
North America	2064009	2064009	4092535	0
Europe	664345	525788	1802107	306593
Asia, Australasia	580067	580067	882805	0
South America	88263	88263	88263	0
Africa and Middle East	85760	85760	432	0

C7.6

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

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Manufacturing Operations	2985161	2876418
Non-manufacturing Operations	497283	467469

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	2985161	2876418	Data includes all global manufacturing operations
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C-TO7.8

(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.

Activity

Light Duty Vehicles (LDV)

Emissions intensity figure

0.00018

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e

161356663.3

Metric denominator

p.mile

Metric denominator: Unit total

899025258740

% change from previous year

1.3

Vehicle unit sales in reporting year

5775812

Vehicle lifetime in years

10

Annual distance in km or miles (unit specified by column 4)

9321

Load factor

1.67

Please explain the changes, and relevant standards/methodologies used

The load factor of 1.67 passengers per vehicle is based on passenger vehicle occupancy factors in the U.S. published by the 2017 U.S. National Household Transportation Survey (<https://nhts.ornl.gov/>). We use the same occupancy factors for all regions of the world. Little data is available. European data from 20 years ago (<https://www.eea.europa.eu/publications/ENVISSUENO12/page029.html>) is consistent with the 2017 U.S. factors. The increase in tCO2eq/p.km is due to greater total emissions from increased sales and higher CO2-intensity of the vehicles. We calculate total use of sold products as described in question C6.5: 2017 sales and gCO2/km emissions data for cars and light commercial vehicles was collected for US, EU, China, Canada, Mexico, Brazil, Australia and India. These regions represent about 87% of all vehicles sold in 2017. The fleet average sales-weighted gCO2/km was calculated. Assuming 150,000 km lifetime, the total CO2 emissions of the 2017 fleet were calculated.

C7.9

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

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	71600	Decreased	1.5	Increase in utility supplied renewable energy
Other emissions reduction activities	196845	Decreased	4.1	Global emission reduction projects / energy efficiency projects reduced gross CO2e emissions by 4.1% using gross S1 + S2 emissions for 2016 as a base (4,617,345), holding the emission factors constant.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology	300579	Decreased	6.27	Updated emission factors to USEPA for all US locations, and IEA for rest of world. Calculations were completed using 'former' emission factors and updated emission factors for 2017. Data was compared and % determined.
Change in boundary	382974	Increased	7.99	Added comprehensive global non-manufacturing operations and added two new manufacturing facilities launched in 2017. A separate total was calculated for all the additional facilities added in 2017 and % increase was calculated using base 2017 data.
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?

Location-based

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 undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
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 MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	6931037	6931037
Consumption of purchased or acquired electricity	<Not Applicable>	0	13112024	13112024
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	1214322	1214322
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	0	21256383	21256383

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 steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6931037

MWh fuel consumed for the self-generation of electricity

194258

MWh fuel consumed for self-generation of heat

165479

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

359737

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Natural Gas

Emission factor

1.9223

Unit

kg CO2 per m3

Emission factor source

United States EPA GHG Inventory Database

Comment

For consistency US EPA factors used.

C8.2e

(C8.2e) 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	143895	143895	0	0
Heat	125188	125188	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

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

Basis for applying a low-carbon emission factor

Energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Wind

Hydropower

MWh consumed associated with low-carbon electricity, heat, steam or cooling

271143

Emission factor (in units of metric tons CO₂e per MWh)

0

Comment

Ford receives energy sourced with a low carbon emission factor for our operating facilities in Cologne.

C-TO8.4

(C-TO8.4) Provide any efficiency metrics that are appropriate for your organization’s transport products and/or services.

Activity

Light Duty Vehicles (LDV)

Metric figure

186.2

Metric numerator

tCO2e

Metric denominator

Use phase: Vehicle.km

Metric numerator: Unit total

161356663

Metric denominator: Unit total

866371800000

% change from previous year

1.3

Please explain

The Ford global fleet average tCO2/km increased from 2016 to 2017 because sales of larger vehicles increased. In particular, sales of medium-heavy duty trucks in the U.S. increased by 28%.

Activity

Light Duty Vehicles (LDV)

Metric figure

0.63

Metric numerator

tCO2e

Metric denominator

Production: Vehicle

Metric numerator: Unit total

4168442

Metric denominator: Unit total

6602888

% change from previous year

-9.7

Please explain

The Ford global average of tCO2e/vehicle produced decreased from 2016 to 2017 by 9.7%. Emission reduction activities accounted for a 4.1% reduction. The remainder (5.6%) is a result of changes in emission factors to USEPA and IEA.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

3.2

Metric numerator

kilograms

Metric denominator (intensity metric only)

vehicle produced

% change from previous year

18

Direction of change

Decreased

Please explain

This figure is waste sent to landfill from global manufacturing operations, divided by global vehicles produced. Ford recognizes that landfills generate greenhouse gas emissions, and reduction in waste sent to landfill will reduce greenhouse gas emissions. Ford currently has 50 manufacturing plants that are send zero waste to landfill.

Description

Other, please specify (Water Usage)

Metric value

3.7

Metric numerator

cubic meters

Metric denominator (intensity metric only)

vehicle produced

% change from previous year

2

Direction of change

Decreased

Please explain

Since 2000, we have reduced our operational water use by 62.5 percent, saving 10.4 billion gallons of water. In 2017, we continued our trend of ongoing improvement with a further overall reduction of 2 percent, while our South African facilities reduced their per-vehicle water use by 10 percent from the previous year. Ford recognizes that climate change can exacerbate water scarcity.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity

Light Duty Vehicles (LDV)

Metric

Production

Technology

Vehicle using bio-fuel

Metric figure

454730

Metric unit

Units

Explanation

Bio-Fuel Vehicles: In the U.S. in 2017, Ford produced 454,730 flexible-fuel vehicles (FFV), representing 6% of U.S. production. FFVs are available in the U.S. on 6 vehicle models: Focus, Escape, Explorer, F-150, Transit, and Taurus.

Activity

Light Duty Vehicles (LDV)

Metric

Production

Technology

Battery electric vehicle (BEV)

Metric figure

1484

Metric unit

Units

Explanation

BEV: In the U.S. in 2017, Ford produced 1484 Focus Electric BEVs, representing 0.1% of U.S. production.

Activity

Light Duty Vehicles (LDV)

Metric

Production

Technology

Plug-in hybrid vehicle (PHEV)

Metric figure

24356

Metric unit

Units

Explanation

PHEV: In the U.S. in 2017, Ford produced 24,356 PHEVs, representing 1% of U.S. production. PHEVs are available in the U.S. on 2 vehicle models: Fusion Energi and C-MAX Energi.

Activity

Light Duty Vehicles (LDV)

Metric

Production

Technology

Conventional hybrid

Metric figure

75189

Metric unit

Units

Explanation

Conventional Hybrid: In the U.S. in 2017, Ford produced 75,189 HEVs, representing 3% of U.S. production. HEVs are available in the U.S. on 3 vehicle models: Fusion Hybrid, C-MAX Hybrid, and Lincoln MKZ Hybrid.

Activity

Light Duty Vehicles (LDV)

Metric

Production

Technology

Vehicle using LPG/CNG

Metric figure

3

Metric unit

Units

Explanation

LNG/CNG: In the U.S. in 2017, Ford produced versions of the F-150, Transit and Transit Connect with a Gaseous Engine Prep Package. These vehicles are ready for conversion to CNG or LPG by a network of Ford-endorsed Qualified Vehicle Modifier partners.

C-T09.6/C-TS9.6

(C-T09.6/C-TS9.6) What is your investment in research and development (R&D), equipment, products and services and which part of it would you consider a direct investment in the low-carbon transition?

Activity

Light Duty Vehicles (LDV)

Investment start date

January 1 2017

Investment end date

December 31 2017

Investment area

Products

Technology area

Electrification

Investment maturity

Large scale commercial deployment

Investment figure

11000000

Low-carbon investment percentage

81-100%

Please explain

Ford's Engineering, Research and Development expenses were \$8 billion in 2017. We are investing \$11 billion in electrified vehicle (EV) solutions and will add 40 new EVs to our portfolio by 2022.

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 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

2016EY TCR Verification Statement.pdf

Page/ section reference

In process. Ford has updated their Global GHG Inventory System to include global Scope 1 and 2 emissions under their organizational control. This is the first year for Ford to complete a 100% global verification of Scope 1 and 2 emissions within their organizational control. The final verification report from the third party auditor is expected in September 2018. Attached are the EU ETS certification of emissions for European facilities.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for reporting year-previous statement of process attached

Type of verification or assurance

Limited assurance

Attach the statement

2016EY TCR Verification Statement.pdf

Page/ section reference

In process. Ford has updated their Global GHG Inventory System to include global Scope 1 and 2 emissions under their organizational control. This is the first year for Ford to complete a 100% global verification of Scope 1 and 2 emissions within their organizational control. The final verification report from the third party auditor is expected in September 2018. Attached are the EU ETS certification of emissions for European facilities.

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope

Scope 3- at least one applicable category

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year - first year it has taken place

Attach the statement

Page/section reference

In process

Relevant standard

ISO14064-3

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?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

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

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

Other ETS, please specify (Carbon Reduction Commitment)

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS

13.9

Period start date

January 1 2017

Period end date

December 31 2017

Allowances allocated

131660

Allowances purchased

0

Verified emissions in metric tons CO2e

161129

Details of ownership

Facilities we own and operate

Comment

Other ETS, please specify

% of Scope 1 emissions covered by the ETS

0.3

Period start date

April 1 2017

Period end date

August 31 2018

Allowances allocated

0

Allowances purchased

14300

Verified emissions in metric tons CO2e

14300

Details of ownership

Facilities we own and operate

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Ford's strategy to comply with the schemes is to leverage our CO2 emissions reduction and energy use reduction strategies. Our target is a corporate reduction of energy use of 25% kWh/vehicle. To achieve this we stopped operation of the combined heat & power plant in Valencia, decommissioning wasteful absorption chillers and introducing smaller modulating hot water boilers. At Dagenham & Bridgend, we decommissioned oversized boiler plant and replaced them with modern, efficient, fully automated systems. Likewise, Bridgend received a smaller modulating boiler for summer process heating. Further, we executed many projects to enable heat recovery from paint shop exhaust processes and implemented air recirculation controls on facility heating systems. Compliance with the schemes rules is achieved through ongoing monitoring of our actual emissions via our Global Emissions Monitoring Database. Based on this information, total annual emissions are forecast and evaluated against our emissions allowance status. Data is internally and externally reviewed to ensure data integrity.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

2

% total procurement spend (direct and indirect)

63

% Scope 3 emissions as reported in C6.5

37

Rationale for the coverage of your engagement

We have more than 1200 production suppliers and 10,000 indirect suppliers with an annual spend of more than \$110 billion (USD). While we engage with only 2% of the total number of suppliers, they represent 63% of our spend and 37% of our spend in the purchased goods and services category of our Scope 3 emissions. Therefore, this group of suppliers represent the greatest opportunity to reduce our collective footprint.

Impact of engagement, including measures of success

Ford's measure of success for this engagement activity is a target of 80% response rate to the CDP supply chain questionnaire and in 2017, 83% of suppliers responded, exceeding our internal goal. The impact of the engagement is measured by comparing year-over-year performance on key indicators. For example, the % of suppliers who have reported setting an emissions reduction target increased from 64% in 2016 to 66% in 2017; the % of suppliers who integrate climate change into their business strategy also increased over that time frame, from 82% to 84%. Suppliers reporting intensity targets also increased from 49% to 52%.

Comment

C12.1c

(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

The Ford Go Green Dealership Program was developed and offered to dealerships throughout the United States. Over 1600 dealerships participated representing approximately 50% of the total dealership body. Detailed assessments were prepared for each participating dealership identifying specific utility upgrades that, if implemented, would result in energy savings for the dealership. An average dealership can save \$35,000 in energy cost by implementing the recommendations of the assessment. This also results in a carbon footprint reduction of 210 metric tons of carbon dioxide per year for the average dealership. Through mid-2018, approximately 20% of dealership have implemented significant portions of the recommendations. The total annual carbon footprint reduction calculates to be 40,000 metric tons for the energy improvements made by dealership through this date. As more dealership implement similar improvements, the annual carbon footprint reduction could ultimately grow to 100,000 metric tons per year if 50% of these dealerships make upgrades. Dealerships have a small footprint relative to other categories but there are 3,263 dealership within the United States which increases the significance. We have completed the assessments performed as part of the “Go Green” Dealer Sustainability Program we launched in 2010. The program addressed efficiency improvements and cost savings at dealerships in the areas of lighting, HVAC, building envelope, water use and renewable energy applications. Each participating dealership received a Go Green Assessment identifying opportunities to increase their utility efficiencies, lower their energy costs and reduce their carbon footprints. As of the mid-2018, nearly half of our 3,263 U.S. dealers had completed these assessments as part of the electric vehicle (EV) and “Trustmark” programs. These assessment reports identified that the average dealership has the opportunity to reduce their energy consumption by 25 percent, resulting in an annual savings of \$35,000 with a payback of 4 years. Upgrading lighting systems is specifically attractive and may have paybacks of one year. Ford Land has developed a listing of recommended lighting fixtures available to dealerships at Ford preferential pricing. This data is available to dealerships for their use in upgrading their lighting systems so that they can achieve quality lighting at preferred pricing and achieve excellent returns on their investments

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Cap and trade	Support with minor exceptions	Ford will continue to engage constructively with the Ontario government (MOECP, MEDEI, MOF, etc.) on climate change through the Canadian Vehicle Manufacturers Association (CVMA).	Legislation is final. Ongoing efforts relate to minimizing the impact of cap and trade program on all operations – vehicle assembly and components as well as the supply chain by recognizing that automotive manufacturing and its associated supply chain is trade sensitive and has access to cap and trade revenue for GHG improvements.
Energy efficiency	Support	Ford is a member of a governor's focus group developing and supporting energy efficiency programs in Michigan.	Regulated utility requirement to meet energy efficiency targets.
Other, please specify (Greenhouse Gas)	Support with minor exceptions	Ford engages on a variety of issues related to CO2 and climate change globally. One example is our work with NHTSA and EPA in the development and promulgation of aggressive U.S. light and heavy duty fuel economy and GHG standards. The existing light duty standards put automobile manufacturers on path to reduce vehicle GHG emissions by approximately 50 percent over the life of the program. The current program is under evaluation, but Ford remains committed to achieving CO2 reductions according to our CO2 glidepath. The heavy duty standards save approximately 530 million barrels of oil over the life of the program.	Ford continues to work with global policy makers on CO2 regulations. We have reiterated our commitment to continuing to make greenhouse gas reductions despite flux in the system. For example, in a Medium post by Bill Ford and Jim Hackett titled “A Measure of Progress,” our leadership made our policy intentions clear: “We support increasing clean car standards through 2025 and are not asking for a rollback. We want one set of standards nationally, along with additional flexibility to help us provide more affordable options for our customers. We believe that working together with EPA, NHTSA and California, we can deliver on this standard.”

C12.3b

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

Yes

C12.3c

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

Trade association

Ford works with a broad range of industry and trade organizations to encourage debate and provide insight and background on a variety of issues related to CO2 and climate change, including alternative fuels, alternative fuel vehicles, transportation policy, emissions regulations, research and development initiatives and tax policy. One organization that we interface with corporate wide is the Alliance of Automobile Manufacturers. We also work globally with organizations like Engine Manufacturers

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

In the U.S., we engage with the Alliance of Automobile Manufacturers, an advocacy group for the auto industry, represented by the BMW Group, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America and Volvo Cars North America. The Alliance develops and implements solutions to public policy challenges that promote sustainable mobility and benefit society in the areas of environment, energy and motor vehicle safety. ACEA is the European Automobile Manufacturers Association representing manufacturers of passenger cars, vans, trucks and buses with production sites in the EU. ACEA members include BMW, DAF, Daimler, FCA, Ford, Hyundai, IVECO, Jaguar & Land Rover, GM, PSA, Renault, Toyota, Volkswagen, Volvo Cars and Volvo. ACEA also plays an active role in China to engage in the communication with Chinese authorities and other stakeholders to protect the common interests and positions of industry by using their expert knowledge and resources from members. The Alliance of Automobile Manufacturers and ACEA are just two examples. There are many other associations we work with on a global basis to develop industry solutions to public policy challenges. Of course, we don't always agree with every position taken by these organizations; in such cases, we always reserve the right to speak with our own voice and make our own stance clear, even if our views don't align with the positions of the associations to which we belong

How have you, or are you attempting to, influence the position?

We continue to actively engage and encourage debate on a wide range of issues within these groups.

C12.3d

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

No

C12.3f

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

Ford seeks to be an active participant in the political process in a manner that is transparent and supports our business interests. Across a range of issues, we strive to be part of the solution, supporting international, national, regional and local policies that are economically, environmentally and socially sustainable for our company, our customers and their communities. On issues of the highest priority, including issues related to climate change, we maintain regular dialogue with legislators and regulatory officials in our major markets, sharing our expertise and adding our perspective to the policy-making process. Our Government Affairs offices around the world oversee these lobbying activities. We belong to a broad range of partnerships, coalitions, industry groups and trade associations that advocate for legislation and regulation on behalf of their members. Ford's participation in the industry associations is cross-functional, including Government Affairs, Legal staff, Public Affairs and the Sustainability, Environment and Safety Engineering team. This assures a consistent internal and external policy and messaging that is aligned with our overall climate change strategy. Working with others through such organizations enables us to better leverage our resources on important issues, and to develop and promote policies that could have far-reaching benefits for our company, but also our industry and society as a whole. Of course, we don't always agree with every position taken by these organizations; in such cases, we always reserve the right to speak with our own voice and make our own stance clear, even if our views don't align with the positions of the associations to which we belong. Deciding when to speak out does not follow a process. Instead, it is done on a case-by-case basis based on the issue at hand. For example, when commenting on proposed regulations, Ford may submit comments separate from our industry association if Ford identifies that an aspect of our stance that is different than other automakers in the industry association. Ford will also occasionally make public statements when we feel strongly about certain issues. An example of Ford speaking out is Ford's "What Sustainability Means to Us" video, which reiterated our commitment to do our part to go further for the planet, despite threats of the U.S. pulling out of the Paris Climate Change Agreement and rolling back fuel economy standards: <https://www.youtube.com/watch?v=Gy24EejkOjc>.

C12.4

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

Publication

In mainstream reports

2017 Annual Report includes Strategy, Governance, Risks and Opportunities, pages 3-11, 28-33
(https://s22.q4cdn.com/857684434/files/doc_financials/2017/annual/Final-Annual-Report-2017.pdf)

Status

Complete

Attach the document

Ford Annual-Report-2017.pdf

Content elements

Governance

Strategy

Risks & opportunities

Publication

In mainstream reports

2017 10K - includes Governance, Strategy, Risks and Opportunities, pages 7-27 (<http://d18rn0p25nwr6d.cloudfront.net/CIK-0000037996/4f90d024-95f4-4f27-86f7-ce89d6b320a9.pdf>)

Status

Complete

Attach the document

Ford 10K 2017.pdf

Content elements

Governance

Strategy

Risks & opportunities

Publication

In voluntary sustainability report

Includes Strategy, Governance, Risks and Opportunities, Targets and Reporting
(<https://corporate.ford.com/microsites/sustainability-report-2017-18/index.html>)

Status

Complete

Attach the document

Ford Sustainability Report 2017-2018.pdf

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Publication

In mainstream reports

2018 Proxy Statements includes Governance, Strategy, Risks and Opportunities
(https://s22.q4cdn.com/857684434/files/doc_financials/proxy/Ford-Motor-Company.pdf)

Status

Complete

Attach the document

Ford Proxy Stmt 2018.pdf

Content elements

- Governance
 - Strategy
 - Risks & opportunities
 - Other metrics
-

C14. 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.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Exec Vice Pres and Pres, Global Ops reporting to CEO. COO doesn't exist but role is similar overseeing global Product Dev; Mfg & Labor Affairs; Quality; Purchasing; Sustainability, Envir & Safety Eng	Chief Operating Officer (COO)

SC. Supply chain module

SC0.0

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

Ford Motor Company is a global automotive company based in Dearborn, Michigan with about 202,000 employees and 61 plants worldwide. Our core business includes designing, manufacturing, marketing, financing and servicing a full line of Ford cars, trucks, SUVs and electrified vehicles, as well as Lincoln luxury vehicles. At the same time, Ford is aggressively pursuing emerging opportunities through Ford Smart Mobility, the company's plan to be a leader in connectivity, mobility, autonomous vehicles, the customer experience, and data and analytics. The company provides financial services through Ford Motor Credit Company. For more information regarding Ford and its products worldwide or Ford Motor Credit Company, visit www.corporate.ford.com. Contributing to a better world has always been a core value at Ford, and our commitment to sustainability is a key part of who we are. Our vision is to create an even more dynamic and vibrant company that improves people's lives around the world and creates value for all of our stakeholders. Our sustainability efforts today can bring about a better tomorrow:- Our pledge to do our part remains the same as we are focused on reducing greenhouse gas emissions in our operations and products, today and in the future. Ford's lineup today brings customers great choices in affordable fuel economy and quality.- We remain absolutely committed to improving fuel efficiency for our customers and for the environment, which is why we're investing an additional \$11 billion in electric vehicle solutions by 2022. For us, mobility is about human progress and making people's lives better in mature economies and major cities as well as helping solve problems in areas of the world that tend to be under-served by technology advances. Beyond our fence line, we're committed to reducing the environmental footprint with our key suppliers. With stakeholders expecting us to be ever-more sustainable, we are working with our complex network of suppliers to reduce our combined environmental footprint through our Partnership for A Cleaner Environment (PACE) program.- To us, driver safety is not just about making safer vehicles. We're also promoting safer behavior through a range of driver assist and semi-autonomous technologies. Details of our strategies, goals and progress can be found within the 2017/18 Sustainability Report (<http://corporate.ford.com/microsites/sustainability-report-2017-18/index.html>)

SC0.1

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

	Annual Revenue
Row 1	156776000000

SC0.2

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

Yes

SC0.2a

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

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	3453708600

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

AT&T Inc.

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

1033.53

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO2 footprint results from the in-use phase of our products by our customers. Total Emissions: 1473.33 metric tons Scope 1: 439.8 Scope 2: 1033.53

Requesting member

BT Group

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

483.63

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO2 footprint results from the in-use phase of our products by our customers. Total Emissions: 689.43 metric tons Scope 1: 205.8 Scope 2: 483.63

Requesting member

Companhia de Concessões Rodoviárias - CCR

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

0

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has no records of CCR purchasing Ford vehicles in the 2017 CY

Requesting member

Deutsche Telekom AG

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

286.23

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO₂ footprint results from the in-use phase of our products by our customers. Total Emissions: 408.03 metric tons Scope 1: 121.8 Scope 2: 286.23

Requesting member

Eaton Corporation

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

55.46

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and

energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO2 footprint results from the in-use phase of our products by our customers. Total Emissions: 79.06 metric tons
Scope 1: 23.6 Scope 2: 55.46

Requesting member

Endesa

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

0

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has no records of Endesa purchasing Ford vehicles in the 2017 CY

Requesting member

Fiat Chrysler Automobiles NV

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

0

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has no records of Fiat Chrysler purchasing Ford vehicles in the 2017 CY

Requesting member

Jaguar Land Rover Ltd

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

0

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has no records of Jaguar Land Rover purchasing Ford vehicles in the 2017 CY

Requesting member

National Grid PLC

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

239.7

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO₂ footprint results from the in-use phase of our products by our customers. Total Emissions: 341.7 metric tons
Scope 1: 102 Scope2: 239.7

Requesting member

Philip Morris International

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

370.36

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO₂ footprint results from the in-use phase of our products by our customers. Total Emissions: 527.96 metric tons
Scope 1: 157.6 Scope 2: 370.36

Requesting member

U.S. General Services Administration (GSA)

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

8771.61

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO₂ footprint results from the in-use phase of our products by our customers. Total Emissions: 12504.21 metric tons Scope 1: 3732.6 Scope 2: 8771.61

Requesting member

Wal-Mart Stores, Inc.

Scope of emissions

Scope 2

Emissions in metric tonnes of CO₂e

229.36

Uncertainty (±%)

1

Major sources of emissions

Scope 2 emissions from combustion of mobile sources

Verified

No

Allocation method

Allocation based on the number of units purchased

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

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO₂ footprint results from the in-use phase of our products by our customers. Total Emissions: 326.96 metric tons Scope 1: 97.6 Scope 2: 229.36

SC1.2

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

Ford Sustainability Report: <https://corporate.ford.com/microsites/sustainability-report-2017-18/index.html>

Ford Sustainability Report Operations: <https://corporate.ford.com/microsites/sustainability-report-2017-18/operations/index.html>

Ford Sustainability Report Emissions per Vehicle Produced: <https://corporate.ford.com/microsites/sustainability-report-2017-18/performance-data-reporting/operations/energy.html#d>

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
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	The range and geographic diversity of the products purchased by these customers makes this infeasible to overcome.

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.

Ford has a robust environmental management system (EMS) for tracking the Scope 1 and 2 emissions from our operations and energy use. Assigning a level of Scope 1 and Scope 2 to this group of customers (individually) results in a statistically insignificant number /allocation per customer. However, Ford did assign allocations to the customers as noted in SM1.1. Ford understands that the largest part of our CO2 footprint results from the in-use phase of our products by our customers.

SC2.1

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

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC3.1

(SC3.1) Do you want to enroll in the 2018-2019 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2017-2018 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services, if so, what functionality will you be using?

No, I am not providing data

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

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms