## **Carbon Disclosure Project**

CDP 2013 Investor CDP 2013 Information Request Ford Motor Company

## **Module: Introduction**

Page: Introduction

0.1

Introduction

Please give a general description and introduction to your organization

Ford Motor Company, a global automotive industry leader based in Dearborn, Mich., manufactures or distributes automobiles across six continents. With about 175,000 employees and 65 plants worldwide, the company's automotive brands include Ford and Lincoln. The company provides financial services through Ford Motor Credit Company. For more information regarding Ford and its products, please visit www.ford.com.

0.2

#### Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed

Sun 01 Jan 2012 - Mon 31 Dec 2012

#### Enter Periods that will be disclosed

#### 0.3

#### **Country list configuration**

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response

#### Select country

United States of America Rest of world

#### 0.4

#### **Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

#### 0.6

#### Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors, companies in the oil and gas industry and companies in the information technology and telecommunications sectors should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdproject.net. If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdproject.net/en-US/Programmes/Pages/More-questionnaires.aspx.

## Module: Management [Investor]

## Page: 1. Governance

1.1

## Where is the highest level of direct responsibility for climate change within your company?

Individual/Sub-set of the Board or other committee appointed by the Board

1.1a

## Please identify the position of the individual or name of the committee with this responsibility

Because the climate change issue is so important to us at Ford, it is managed through governance systems at all levels of the Company. The Sustainability Committee of our Board of Directors regularly reviews Ford's actions related to climate change.

Substantive changes to our plans for addressing climate change - whether relating to our products, facilities or policies - are highlighted and agreed to at the highest levels of Ford's executive management through the Business Plan Review process chaired by our CEO, Alan Mulally. Related emerging issues are reviewed as needed in Special Attention Review meetings.

In addition, strategic product and manufacturing direction related to climate change goals is provided by a senior executive committee, made up of vice president and executive stakeholders, who guide the development of the vision, policy and business goals.

Related executive planning teams are responsible for developing detailed and specific policy, product and technical analyses to meet objectives. These teams base their plans on scientific data and promote actions that will help achieve the Company's environmental ambitions, recognizing the need to use a holistic approach to effectively protect the environment. Metrics have been established and are reviewed regularly to ensure satisfactory progress. We have also developed strategic principles to guide our approach.

## 1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

#### Please complete the table

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator
Other: All non-manufacturing labor employees	Monetary reward	Integrated into the managment's annual business review process but written in the language of the automotive industry.
Other: All non-manufacturing labor employees	Recognition (non- monetary)	Integrated into the managment's annual business review process but written in the language of the automotive industry.

## Page: 2. Strategy

## 2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

## 2.1a

#### Please provide further details

Ford's governance of sustainability issues builds on a strong foundation of Board of Director and senior management accountability for the Company's environmental, social and economic performance. At the Board level, the Sustainability Committee has primary responsibility for reviewing strategic sustainability issues, though some of those issues are also addressed in other committees and by the Board as a whole. Within management, the Vice President of Sustainability, Environment and Safety Engineering has primary responsibility for sustainability issues and oversees the Sustainable Business Strategies, Environmental Policy, and Safety groups, as well as having dotted-line oversight over the Sustainable Mobility Technology group (which is formally part of the Product Development function).

Ford has also developed structures to address specific global sustainability issues facing the Company. For example, we have established a Sustainable Mobility Governance Forum – a senior-level team led by the Vice President of Sustainability, Environment and Safety Engineering – responsible for defining our climate change strategy and delivering our sustainability strategy in the marketplace. The Group's strategic direction is provided by a senior executive forum, including Vice President and executive stakeholders, which guides the development of the vision, policy and business goals.

#### 1.2a

We believe that integrating sustainability considerations into our existing systems and processes – rather than creating new systems and processes – is the most effective way to embed sustainability into our business. The following are some examples of how we are doing this.

Business Plan Development, Business Plan Review and Compensation: As part of the annual business planning process, Ford's business units develop scorecards to track their performance. Metrics from these scorecards are part of the performance assessment of managers at various levels of the Company and affect their compensation. Executive compensation is affected by the Company's performance in a range of areas, including sustainability. Sustainability issues are a formal part of Ford's biweekly Business Plan Review (BPR) meetings, one of the key management processes used within the Company. At these regular, frequent meetings, convened by Ford's CEO, members of the Company's top leadership team review sales, financial, manufacturing and other information to help them manage global operations and identify issues that are critical to the future of the Company. Each unit also provides an update on performance relative to their individual scorecards. To help us manage corporate-wide sustainability issues, Ford has developed a sustainability scorecard, which is reviewed alongside other units' scorecards at the BPR meetings. Also, functions including Manufacturing, Product Development and Purchasing have integrated sustainability-specific indicators into their overall scorecards.

Special Attention Review and Automotive Strategy Meetings: Ford's President & CEO also convenes regular Special Attention Review and Automotive Strategy meetings to look in depth at issues identified as potential concerns on any unit's scorecard. Sustainability issues have been covered at these meetings, including, in 2012, global energy trends, U.S. energy security, industry developments and Ford's electrification strategy.

Management Systems: Ford uses a variety of systems and processes to manage the different aspects of our business, several of which govern or incorporate sustainability issues. For example, all Ford manufacturing facilities and our Product Development function are certified to ISO 14001, the leading global system standard for managing environmental issues. We have also asked our preferred "Q1" suppliers of production parts to certify their facilities to ISO 14001. In another example, Ford's Purchasing function has integrated assessments of working conditions into its broader process for evaluating suppliers on issues such as quality, cost and delivery.

Corporate Policy Letters and Directives: Ford maintains a comprehensive set of Policy Letters, Directives and other corporate standards that govern all Company activities. Several of these relate to aspects of sustainability. For example, in 2003 Ford adopted a Code of Basic Working Conditions, the implementation of which is supported by a robust assessment and training process. The Code of Basic Working Conditions was updated in 2006, and in 2007 it was approved and formally adopted as corporate Policy Letter #24. It was updated again in 2012.

Our product globalization strategy is designed to help us respond to changing markets and regional preferences and the risks and opportunities presented by the climate change issue. We have created global platforms that offer superior fuel economy, safety, quality and customer features. We then tailor each global platform to national or regional preferences and requirements. Our pledge that all our vehicles will offer the best or among the best fuel economy in their segment, coupled with a technology migration plan that is based on the science of climate change, positions us to keep pace or get ahead of regulatory requirements. New technology is also cutting the time required to bring new vehicles to market, which helps us respond more effectively to the ever-increasing pace of change in our markets.

Supply Chain Sustainability: We are continuing our work to better understand the risks and opportunities of greenhouse gas (GHG) regulation and climate change for our suppliers and, by extension, for our Company. In 2010, we launched a pilot program with a select group of our suppliers to better understand the collection and reporting of greenhouse gas emissions data in our supply chain. In 2011, we significantly expanded the program to include a wider range of suppliers and commodities. Our goal is to better understand the carbon footprint of our supply chain and to use the data to create a broad-based carbon management approach for our supply chain. In 2012, we again expanded the program to include more suppliers. In 2012, we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. We achieved an overall response rate of 92 percent in 2012, again exceeding our internal objectives for this round of voluntary surveys.

#### Is climate change integrated into your business strategy?

Yes

#### 2.2a

#### Please describe the process and outcomes

Ford is committed to doing our share to prevent or reduce the potential for environmental, economic and social harm due to climate change.

We have a comprehensive, science-based global strategy to reduce greenhouse gas (GHG) emissions from our products and processes while working cooperatively with the public and private sectors to advance climate change solutions. We are taking a holistic approach to the issue, recognizing that it affects all parts of our business and is interconnected to other important issues, from water availability and energy security to human rights.

We believe our commitment to addressing the climate change issue in a comprehensive and strategic way is one of the factors that has helped to positively transform our Company's current and future products and prospects.

#### Our Commitment

Our climate change strategy is based on doing our share to stabilize carbon dioxide (CO2) concentrations in the atmosphere at 450 parts per million (ppm), the level that many scientists, businesses and governmental agencies believe may avoid the most serious effects of climate change. This commitment includes the following: Each new or significantly refreshed vehicle will be best in class, or among the best in class, for fuel economy

From our global portfolio of products, we will reduce GHG emissions consistent with doing our part for climate stabilization – even taking into account sales growth We will reduce our facility CO2 emissions by 30 percent from 2010 to 2025 on a per-vehicle basis and average energy consumed per vehicle by 25 percent from 2011 to 2016 globally

For an in-depth look at the science behind our commitment, please see Ford's Science-Based CO2 Targets.

Our technology migration plan for achieving vehicle CO2 emissions reductions – embodied in our Sustainable Technologies and Alternative Fuels Plan – maps the road we're taking to achieve our product goals.

Please explain why not

## 2.3

Do you engage in activities that could either directly or indirectly influence policy on climate change through any of the following? (tick all that apply)

Direct engagement Trade associations Funding research organizations

## 2.3a

## On what issues have you been engaging directly?

Focus of legislation	Corporate Position	Details of engagement	Proposed solution
		Ford engages on a variety of issues related to CO2 and climate change including our work with NHTSA and EPA in the development and promulgation of aggressive fuel economy and GHG standards covering the 2012-2025 model years. These standards, collectively known as One National Program, put automobile manufacturers on path to reduce vehicle GHG emissions by approximately 50 percent over the life of the program.	Ford continues to work with the Obama Administration and policy makers on these regulations and the upcoming mid-term review of the fuel economy and GHG standards in 2017.

## 2.3b

Are you on the Board of any trade associations or provide funding beyond membership? Yes

## 2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to influence the position?
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. These organizations include the Alliance of Automobile Manufacturers, the Michigan Manufacturers Association and the National Association of Manufacturers.	Mixed		We continue to engage and encourage debate on a wide range of issues within these groups.

## 2.3d

Do you publically disclose a list of all the research organizations that you fund?

## No

## 2.3e

Do you fund any research organizations to produce public work on climate change?

## 2.3f

Please describe the work and how it aligns with your own strategy on climate change

## 2.3g

Please provide details of the other engagement activities that you undertake

## 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?

At Ford, we have been working for many years to minimize the environmental impacts of our vehicles and operations. For example, we are doing our part to prevent or reduce the potential for environmental, economic and social harm due to climate change. We have a science-based strategy to reduce greenhouse gas (GHG) emissions from our products and operations that focuses on doing our share to stabilize carbon dioxide (CO2) concentrations in the atmosphere. We are on track to meet the central elements of our strategy: Each of our new vehicles is a leader, or among the leaders, in fuel economy, and we are reducing GHG emissions across our global product portfolio. We have also set a goal to reduce our facility CO2 emissions per vehicle by 30 percent by 2025 compared to a 2010 baseline, building on our reduction of 31 percent from 2000 to 2010.

We are committed to reducing other elements of the environmental footprint of our vehicles and operations as well. For example, we continue to increase the use of sustainable materials in our vehicles. And, we reduced waste to landfill by 17 percent per vehicle from 2011 to 2012 and announced a new plan to reduce waste sent to landfill by 40 percent on a per-vehicle basis between 2011 and 2016 globally. We are also continuing to reduce emissions of volatile organic compounds from our operations through the use of innovative technologies.

2.3i

Please explain why you do not engage with policy makers

## Page: 3. Targets and Initiatives

#### 3.1

Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

Intensity target

2.3h

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
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3.1b

## Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
Ops	Scope 1+2	100%	30%	metric tonnes CO2e per unit of production	2010	1.01	2025	Ford has been a leader in facilities-related greenhouse gas (GHG) and energy-use reductions, public reporting of our GHG emissions, and participation in GHG reduction and trading programs. In 2010, we adopted a goal to reduce our facility carbon dioxide emissions by 30 percent by 2025 on a per-vehicle basis. This goal, which is also based on our stabilization commitment, complements our longstanding facility energy use targets. The U.S. Environmental Protection Agency (EPA) awarded Ford a Goal Setting Certificate for this strategy at its inaugural Climate Leadership Awards Ceremony. Ford was the only automaker to be recognized.

3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Ops	Increase	10			We expect total emissions to increase due to increased production. Despite increased production, the rate of emissions increase will slow significantly and will continue decreasing with existing programs and successes. Further CDP surveys will indicate this. In 2012, Ford established a five-year objective to improve our operational energy use per vehicle globally by 25 percent by the end of 2016 based on a 2011 baseline normalized for weather and production. In 2012, we improved global energy efficiency by 6.4 percent against a 2011 year baseline normalized for weather and production. In 2012, we improved global energy efficiency by 6.4 percent against a 2011 year baseline normalized for weather and production levels. We reduced our overall facilities-related CO2 emissions by approximately 47 percent, or 4.65 million metric tons, from 2000 to 2012. During this same period, we reduced facilities-related CO2 emissions per vehicle by 37 percent. Our total CO2 emissions increased from 2011 to 2012 by 1 percent, while CO2 emissions per vehicle decreased by 1 percent during that period. The Company met its commitment to reduce U.S. facility emissions by 10 percent per vehicle produced between 2002 and 2012, as part of an Alliance of Automobile Manufacturers program.

## 3.1d

## Please provide details on your progress against this target made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
Ops	13.3%	11%	We expect total emissions to increase due to increased production. Despite increased production, the rate of emissions increase will slow significantly and will continue decreasing with existing programs and successes. Further CDP surveys will indicate this. In 2012, Ford established a five-year objective to improve our operational energy use per vehicle globally by 25 percent by the end of 2016 based on a 2011 baseline normalized for weather and production. In 2012, we improved global energy efficiency by 6.4 percent against a 2011 year baseline normalized for weather and production levels. We reduced our overall facilities-related CO2 emissions by approximately 47 percent, or 4.65 million metric tons, from 2000 to 2012. During this

1	D	% complete (time)	% complete (emissions)	Comment
				same period, we reduced facilities-related CO2 emissions per vehicle by 37 percent. Our total CO2 emissions increased from 2011 to 2012 by 1 percent, while CO2 emissions per vehicle decreased by 1 percent during that period. The Company met its commitment to reduce U.S. facility emissions by 10 percent per vehicle produced between 2002 and 2012, as part of an Alliance of Automobile Manufacturers program.

3.1e

Please explain (i) why not; and (ii) forecast how your emissions will change over the next five years

3.2

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

3.2a

Please provide details (see guidance)

Ford is taking a "portfolio approach" to developing sustainable technologies and alternative fuel options. Our goal is to provide diversity in fueling options, in order to meet customers' differing needs, while improving vehicle energy efficiency and long-term sustainability. We are thus providing customers with a range of affordable, fuel-efficient vehicles, advanced powertrains and alternative-fueled vehicle options – including fuel-efficient EcoBoost® gasoline engines, advanced diesel engines, hybrids, plug-in hybrids, all-electric vehicles and alternative-fuel vehicles. We call this approach the "power of choice," because it allows customers to choose the vehicle that best meets their driving needs.

We also believe that traditional gasoline- and diesel-powered vehicles with internal combustion engines will continue to be a major part of the mix for quite some time. So we are working to improve the fuel efficiency of the engines and transmissions of our current vehicles, along with every vehicle subsystem. Most importantly, we are developing global vehicle platforms that are compatible with a wide range of fuels and powertrain technologies. This allows us to offer a portfolio of options to our customers, target options to regions where they make the most sense and evolve our vehicles as technologies and markets develop. Global platforms that have "plug-and-play" compatibility with a wide range of technologies will also allow us to make the range of fuel and powertrain options

available more affordably. For example, we are introducing an all-electric Ford Focus, a next-generation hybrid electric Ford C-MAX and the C-MAX Energi Plug-in Hybrid – all built on our global C-platform.

Also, we currently produce 17 flexible-fuel vehicle models across our global markets; these vehicles can run on either regular gasoline or E85 (a blend of 85 percent ethanol and 15 percent gasoline). In South America, we also offer vehicles that can run on E100. Though biofuels are not available in every market, they are widely available in the U.S. and South America and in some parts of Europe, so it makes sense for us to provide this option to customers who can take advantage of it. In addition, biofuel availability is expected to increase globally. In Europe, the EU's Renewable Energy Directive mandates that 10 percent of energy in the transportation sector must come from renewable fuels by 2020. In the U.S., the Renewable Fuel Standard requires annual increases in the volume of renewable fuels, reaching 36 billion gallons by 2022. Ford's flexible-fuel vehicles, which are provided at little or no additional cost, allow consumers to choose fuels based on availability and price.

We are also producing select vehicle models that can be converted to run on compressed natural gas (CNG) and liquefied petroleum gas (LPG) (also known as propane or Autogas). And, we are working with qualified vehicle modifiers to ensure that conversion to those fuels meets our quality, reliability and durability requirements. The Ford Transit Connect, the entire F-Series Super Duty® pickup truck and chassis cab lineup, our E-Series Van and Cutaway models, as well as our medium-duty trucks, are all available with a CNG/LPG conversion-ready engine package. In Europe, we offer CNG and LPG conversions of various models in markets where dedicated infrastructure exists, such as Italy, Germany and the Netherlands.

CNG and LPG are particularly good options for fleet customers, such as taxi companies and delivery services, that use a central refueling system. In addition, CNG and LPG are widely available as vehicle fuels throughout South America and Europe. We are delivering CNG/LPG-ready engines to provide another lower-carbon option to those customers for whom this option makes sense.

As noted above, we are also developing a range of electrification technologies, including all-electric, hybrid electric and plug-in hybrid electric vehicles. Our vehicle electrification strategy is based on providing customers with a variety of vehicle choices to meet their driving needs. All-electric and plug-in hybrid vehicles may initially make the most sense for urban drivers and fleet users who have daily commutes under 40 miles. However, as battery and recharging options continue to advance, we expect these vehicles to work for a wider range of our customers.

In the longer term, hydrogen may emerge as a viable alternative fuel. Hydrogen has the potential to diversify our energy resources and lower lifecycle greenhouse gas emissions, if low-carbon hydrogen production becomes feasible. To prepare for this, we are developing technology to power vehicles with hydrogen fuel cells. In addition, we are working to pair hydrogen fuel cell technology with vehicle electrification technologies to maximize the sustainability benefits of both technologies. This section describes our current actions and future plans to develop a wide range of energy-efficient technologies, alternative fuels and advanced powertrain technologies that will give our customers near-, mid- and longer-term options for more sustainable vehicles.

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and implementation phases)

Yes

# Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*		
Not to be implemented		

3.3b

## For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
Energy efficiency: Building services	Since 2007, we have been using a utility metering and monitoring system to collect electricity and natural gas consumption data at the plant level for all Ford plants in North America. We are currently expanding this system, called the Global Departmental Level Metering (GDLM) initiative, globally and working to provide more detailed information down to the department level. We use this near-real-time information to create energy- use profiles for plants and to improve decisions about nonproduction shutdowns and load shedding, which involves shutting down certain prearranged electric loads or devices when we reach an upper threshold of electric usage. We are also upgrading and commonizing the Building Management Systems we use at our facilities. These information management initiatives will provide common reporting tools linked with				

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
	production and other data sets, and with facility maintenance and control systems. These efforts will greatly improve the amount of energy data we have and the speed and quality of our energy analyses, which will help us identify energy-reduction opportunities more effectively and reduce the time required to make system changes.				
Energy efficiency: Building services	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 our manufacturing facilities. We are also expanding the use of performance contracting to global facilities using global supplier partners to accomplish the 25 percent energy-efficiency improvement objective.	11000	1300000	5500000	4-10 years
Other	We are also continuing to roll out an Energy Management Operating System (EMOS), which is aligned with our Ford Production System (FPS) and ISO 14000/50001 principles. The EMOS leverages existing lean manufacturing principles, incorporates Plan-Do-Check-Act (PDCA) protocols and uses Six Sigma tools. We developed our EMOS using a cross-functional approach that includes multiple disciplines and all operating regions of the Company. The EMOS is our mechanism for integrating energy-efficient principles into the facility design, manufacturing/engineering processes, and operations of Ford Manufacturing, Office and Engineering facilities. The system provides a common and global structure to support and maintain energy-reduction changes, to achieve the corporate goal of improving global energy use per vehicle by 25 percent between 2011 and 2016. The EMOS is divided into four major sections: Plant Energy Teams – primary engagement with facilities and occupants to effect change Facility Changes – planning for the future (both facility and process) and getting the standards embedded into future product/project plans Data Management – ensure robust data for reporting and analysis Energy Supply and Quality – ensure reliable and low cost energy We are currently rolling out the EMOS as part of our expanded FPS, including establishing a standardized format for Plant Energy Team meetings, Plant Energy Roadmaps, Energy Health Assessments and Energy Reporting.				
Energy	We are continuing to replicate Ford's state-of-the-art "Three-Wet" paint process. This				

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
efficiency: Processes	technology is called "Three-Wet" because the advanced chemical composition of the paint materials used allows for the three layers of paint – primer, base coat and clear coat – to be applied while each layer is still wet, which eliminates the stand-alone primer application and dedicated oven required in the conventional painting process. The Three-Wet process also saves the electricity used by the blowers that are typically needed to circulate massive volumes of air through paint booths, and reduces the amount of natural gas needed to heat the air and ovens. As a result, Three-Wet painting reduces CO2 emissions by 15 to 25 percent and volatile organic compound emissions by 10 percent compared to either conventional high-solids solvent-borne or waterborne systems. In addition to these environmental benefits, this process maintains industry-leading quality and reduces costs. For example, Three-Wet reduces paint processing time by 20 to 25 percent, which correlates to a significant cost reduction. The paint formulation contains new polymers and other additives to prevent running and sagging during the application and curing processes. Ford's laboratory tests show that this high-solids, solvent-borne paint provides better long-term resistance to chips and scratches than waterborne paint systems. In short, the process delivers reduced costs per vehicle, reduced CO2, improved energy efficiency and improved quality. We have implemented the Three-Wet paint process at facilities in the United States, India, Romania, Mexico, China and Thailand. We now use the Three-Wet system at eight of our facilities globally and are expanding it to an additional four plants (two in North America, one in China and one in Spain). Three-Wet conversion will be considered for plant refurbishment actions being planned in line with the corporate business plan.				
Energy efficiency: Processes	We are continuing implementation of a new parts-washing system developed in partnership with our supplier, ABB Robotics. Conventional parts-washing systems remove dirt chemically by spraying parts with high volumes of water and detergent at low pressure. Our new standard system, in contrast, cleans parts mechanically by moving them in front of specialized high-pressure nozzles with a robotic arm. This new system represents a significant leap forward in energy efficiency that also improves quality, flexibility, productivity and cost because it uses a smaller pump and lower operating temperatures. We are now using this technology as standard for all engine and transmission final wash applications globally, ensuring that the energy and cost savings will be realized by all future vehicle programs.				

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
Other	We are also continuing to refine our Paint Emissions Concentrator (PEC) system (formerly referred to as "fumes to fuel,") which reduces the CO2 emissions associated with our paint shop emissions-treatment process. In traditional paint shop emissions treatment, the volatile organic compound (VOC) emissions from solvent-based paints are captured and destroyed in a regenerative thermal oxidizer using natural gas as a fuel. Our PEC technology concentrates VOC emissions from the painting process by approximately 1,500:1. In this super-concentrated state, the VOCs can be burned as a fuel source, significantly reducing the amount of natural gas necessary to destroy them. By reducing the need for natural gas, the PEC system has the potential to reduce CO2 emissions by 70 to 80 percent, compared to traditional abatement equipment. We are also investigating opportunities to reform super-concentrated VOCs into hydrogen, which can then be used as a fuel source for a fuel cell.				
Energy efficiency: Building services	In 2012, we upgraded the lighting at several of our commercial, research and manufacturing facilities through "Mega Lighting" performance contracts. These upgrades included replacing old lighting technologies with high-efficiency (T8 and T5H) fluorescent lighting. As a result, we have reduced annual energy consumption at these buildings by 11.5 million kWh. We are developing other "Mega Lighting" projects for eight additional manufacturing sites, which we predict will reduce our annual electricity consumption by another 5 million kWh. We are also working to identify other "Mega" type projects to leverage single common actions such as lighting upgrades, compressor controls, steam conversion and enhanced Building Management Systems, in partnership with our global performance contracting partners.				
Low carbon energy purchase	Sonora80M Group has signed an agreement to deliver 15% of energy generated at its planned 20MW solar park in Mexico to Ford Motor Company. The solar park will be located in Hermosillo, in the state of Sonora in northern Mexico, and is expected to start operations in 2014.				
Behavioral change	We are aggressively curtailing energy use during non-production periods.				
Energy efficiency: Processes	We are installing automated control systems on plant powerhouses and wastewater treatment equipment to increase energy and process efficiency.				
Low carbon	Ford's Dagenham Diesel Engine Assembly line in the UK was the first automotive plant in				

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
energy installation	the world to obtain all of its electrical power needs from two on-site wind turbines, which have been in operation since 2004. A third two-megawatt wind turbine was installed in 2011.				
Low carbon energy purchase	A few miles from Dagenham, Ford's Dunton Technical Centre is also powered by electricity from renewable sources. Since March 2009, electric power on the 270-acre site, which is home to a team of approximately 3,000 engineers, has been purchased from 100 percent renewable sources. The majority of the electricity, supplied by GDF, is sourced from a combination of hydro, wind and waste-to-energy generation, and replaces energy from traditional sources that would have produced an estimated 35,000 metric tons of carbon-dioxide (CO2) emissions annually.				
Low carbon energy purchase	Since 2008, we have been sourcing renewable electricity to cover the full electric-power demand of our manufacturing and engineering facilities at our Cologne plant in Germany. This includes the electricity needed for the assembly of the Ford Fiesta models at the plant. Through this initiative, the Company has reduced its CO2 emissions by 190,000 metric tons per year.				
Low carbon energy installation	In Wales, Ford's Bridgend Engine Plant was the first site retrofitted with one of the largest integrated, grid-connected solar/photovoltaic installations at a car manufacturing plant in Europe.				
Low carbon energy installation	At our Michigan Assembly Plant we partnered with DTE Energy and the state of Michigan to build a solar photovoltaic array to provide power to the plant and to build an energy storage system to store energy produced by the solar array until it is needed. The energy is stored in a large battery system that in turn recharges electric material-handling vehicles used on site. These vehicles were converted from diesel engines to electric vehicles to move parts between buildings at the site.				
Low carbon energy purchase	The Michigan Assembly Plant also uses methane released from decaying trash at a nearby landfill to heat one of the buildings on site, which reduces emissions of this potent greenhouse gas.				
Low carbon energy installation	In 2012, we installed a solar-powered trash compactor at our Michigan Proving Grounds in Romeo, Michigan, which compresses waste more efficiently than the previous one. The resulting compacted waste is sent to an incinerator where it is converted into power for local residents.				

Activity type			Annual monetary savings (unit currency - as specified in Q0.4)	Investment required (unit currency - as specified in Q0.4)	Payback period
Low carbon energy installation	In India, we have been using solar thermal heating at the Chennai plant to heat water for cooking in the main cafeteria since 2011. Using this system, sterilized water is pumped through thermal solar panels and then taken to the cafeteria for cooking at approximately 50°C higher than water that was previously used in cooking boilers. This system has reduced boiler diesel consumption by approximately 420 liters per day. The system is expected to pay itself back in four years				
Low carbon energy installation	At the Lima Engine Plant in Lima, Ohio, a geothermal system provides process cooling for plant operations as well as air tempering for employee comfort. This system uses naturally cooled 40°F water from two abandoned limestone quarries located on the plant site. The installation cost was comparable to that of the traditional chiller and cooling tower design that it replaced. This award-winning project eliminates the emission of 4,300 metric tons of CO2 each year.				
Low carbon energy installation	The Dearborn Truck Plant has a "living roof" system, which uses a thick carpet of plants to reduce the need for heating and cooling, while also absorbing rainwater.				

## 3.3c

## What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	
Dedicated budget for low carbon product R&D	
Other	In North America, Ford continues to use energy performance contracting as a financing tool to upgrade and replace

Method	Comment
	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 our manufacturing facilities. We are also expanding the use of performance contracting to global facilities using global supplier partners to accomplish the 25 percent energy-efficiency improvement objective. In 2012, we upgraded the lighting at several of our commercial, research and manufacturing facilities through "Mega Lighting" performance contracts. These upgrades included replacing old lighting technologies with high-efficiency (T8 and T5H) fluorescent lighting. As a result, we have reduced annual energy consumption at these buildings by 11.5 million kWh. We are developing other "Mega Lighting" projects for eight additional manufacturing sites, which we predict will reduce our annual electricity consumption by another 5 million kWh. We are also working to identify other "Mega" type projects to leverage single common actions such as lighting upgrades, compressor controls, steam conversion and enhanced Building Management Systems, in partnership with our global performance contracting partners.
Partnering with governments on technology development	We are also continuing to refine our Paint Emissions Concentrator (PEC) system (formerly referred to as "fumes to fuel,") which reduces the CO2 emissions associated with our paint shop emissions-treatment process. In traditional paint shop emissions treatment, the volatile organic compound (VOC) emissions from solvent-based paints are captured and destroyed in a regenerative thermal oxidizer using natural gas as a fuel. Our PEC technology concentrates VOC emissions from the painting process by approximately 1,500:1. In this super-concentrated state, the VOCs can be burned as a fuel source, significantly reducing the amount of natural gas necessary to destroy them. By reducing the need for natural gas, the PEC system has the potential to reduce CO2 emissions by 70 to 80 percent, compared to traditional abatement equipment. We are also investigating opportunities to reform super-concentrated VOCs into hydrogen, which can then be used as a fuel source for a fuel cell.

3.3d

If you do not have any emissions reduction initiatives, please explain why not

## Page: 4. Communication

Have you published information about your company'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	Page/Section reference	Attach the document
In voluntary communications (complete)	147	https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/Investor-4.1-C3-IdentifytAttachment/2012-13 Ford Sustainability Report Full.pdf

## Module: Risks and Opportunities [Investor]

## Page: 5. Climate Change Risks

## 5.1

Have you identified any climate change risks (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation

## 5.1a

## Please describe your risks driven by changes in regulation

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Ford1	Emission	We are continuing our work to better understand the	Increased operational	1-5 years	Direct	About as	Medium

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	reporting obligations	risks and opportunities of greenhouse gas (GHG) regulation and climate change for our suppliers and, by extension, for our Company. Beginning in 2010, we launched a program with a select group of our suppliers to better understand the collection and reporting of greenhouse gas emissions data in our supply chain.	cost			likely as not	
Ford2	Carbon taxes	We are continuing our work to better understand the risks and opportunities of greenhouse gas (GHG) regulation and climate change for our suppliers and, by extension, for our Company. Beginning in 2010, we launched a program with a select group of our suppliers to better understand the collection and reporting of greenhouse gas emissions data in our supply chain. Our goal is to better understand the carbon footprint of our supply chain and to use the data to create a broad- based carbon management (related to risks and opportunities) approach for our supply chain. Suppliers were chosen to participate in the GHG survey based on a variety of criteria, which included the following: The GHG intensity of the commodities supplied. The nature of the business relationship with Ford. The geographic footprint of the supplier's global operations.	Increased operational cost	1-5 years	Indirect (Supply chain)	More likely than not	Medium- high
Ford3	Product efficiency regulations and standards	In recent years, we have made significant changes to our product cycle plan to improve the overall fuel economy of vehicles we produce, thereby reducing their greenhouse gas (GHG) emissions. There are limits on our ability to achieve fuel economy improvements over a given timeframe, however, primarily relating to the cost and effectiveness of available technologies, consumer acceptance of new technologies and changes in vehicle mix, willingness of consumers to absorb the additional costs of new technologies for use in particular vehicles, and the human, engineering and financial resources necessary to deploy new technologies across a wide range of products and powertrains in a short	Reduction/disruption in production capacity	6-10 years	Direct	About as likely as not	Medium- high

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
	time.						

5.1b

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk and (iii) the costs associated with these actions

The worldwide automotive industry is governed by a substantial amount of government regulation, which often differs by state, region, and country. Government regulation has arisen, and proposals for additional regulation are advanced, primarily out of concern for the environment (including concerns about the possibility of global climate change and its impact), vehicle safety, and energy independence. In addition, many governments regulate local product content and/or impose import requirements as a means of creating jobs, protecting domestic producers, and influencing the balance of payments. In recent years, we have made significant changes to our product cycle plan to improve the overall fuel economy of vehicles we produce, thereby reducing their GHG emissions. There are limits on our ability to achieve fuel economy improvements over a given timeframe, however, primarily relating to the cost and effectiveness of available technologies, consumer acceptance of new technologies and changes in vehicle mix, willingness of consumers to absorb the additional costs of new technologies, the appropriateness (or lack thereof) of certain technologies for use in particular vehicles, the widespread availability (or lack thereof) of supporting infrastructure for new technologies, and the human, engineering, and financial resources necessary to deploy new technologies across a wide range of products and powertrains in a short time. The cost to comply with existing government regulations is substantial, and future, additional regulations could have a substantial adverse impact on our financial condition and results of operations. For more discussion of the impact of such standards on our global business, see the "Governmental Standards" discussion in "Item 1. Business" ("Item 1") above. In addition to governmental regulations, a number of influential organizations conduct public domain testing. Even as we continue to evolve our product line, aggressive changes in public domain testing requirements could have a negative influence on future sales. We also face ever-increasing expectations from regulators, public interest groups, and consumers for improvements in motor vehicle fuel economy, for a variety of reasons including energy security and reduced GHG emissions. Our ability to comply with a given set of fuel economy standards (including GHG emissions standards, which are functionally equivalent to fuel economy standards) depends on a variety of factors, including: 1) prevailing economic conditions, including fluctuations in fuel prices; 2) alignment of standards with actual consumer demand for vehicles; and 3) adequate lead time to make necessary product changes. Consumer demand for vehicles tends to fluctuate based on a variety of external factors. Consumers are more likely to pay for vehicles with fuel-efficient technologies (such as hybrid-electric vehicles) when the economy is robust, and when fuel prices are relatively high. When the economy is in recession and/or fuel prices are relatively low, many consumers may put off new vehicle purchases altogether, and among those who do purchase vehicles, demand for higher-cost fuel technologies is not likely to be strong. If consumers demand vehicles that are relatively large and/or high-performance, while regulatory standards require production of vehicles that are smaller and more economical, the mismatch of supply and demand would have an adverse effect on both regulatory compliance and our profitability. Moreover, if regulatory requirements call for rapid, substantial increases in fleet average fuel economy (or decreases in fleet average GHG emissions), we may not have adequate resources and time to make major product changes across most or all of our vehicle fleet (assuming the necessary technology can be developed). We believe that we will be able to comply with the harmonized federal CAFE/GHG standards for the 2012 - 2016 model years, as a result of aggressive actions to improve fuel economy that we built into our cycle plan, and through a variety of flexible compliance mechanisms. In contrast, we had projected that we

would be unable to comply with the state GHG standards that had been in place for the 2012 - 2016 period without undertaking costly product restrictions in some states. Key differences that enable us to project compliance with the national program include: 1) One National Program standards, although very stringent, do not ramp up as steeply as the state standards they are replacing; and 2) One National Program allows us to determine compliance based on nationwide sales rather than state-by-state sales. The ability to average across the nation eliminates state-to-state sales variability and is a critical element for us and for the automotive industry. The 2012-2016 model year One National Program rules currently are being challenged in federal court by entities concerned about the ramifications of these rules on stationary source regulation. The automotive industry has intervened in the litigation in support of the goal of preventing adverse changes to the existing One National Program. For additional discussion of the impact of governmental regulation and our ability to comply, please see our Annual Report on Form 10-K for the year ended December 31, 2012 which is available on the U.S. Securities and Exchange Commission's website, as well as on our corporate website at www.shareholder.ford.com.We are continuing our work to better understand the risks and opportunities of greenhouse gas (GHG) regulation and climate change for our suppliers and, by extension, for our Company.

Beginning in 2010, we launched a program with a select group of our suppliers to better understand the collection and reporting of greenhouse gas emissions data in our supply chain. Our goal is to better understand the carbon footprint of our supply chain and to use the data to create a broad-based carbon management (related to risks and opportunities) approach for our supply chain. Suppliers were chosen to participate in the GHG survey based on a variety of criteria, which included the following:

The GHG intensity of the commodities supplied

The nature of the business relationship with Ford

The geographic footprint of the supplier's global operations

In 2011 and again in 2012, Ford surveyed suppliers using both the CDP Supply Chain Program questionnaire and the AIAG GHG survey, which was developed with input from Ford, other OEMs and Tier 1 suppliers and service providers.

5.1c

Please describe your risks that are driven by change in physical climate parameters

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
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5.1d

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; and (iii) the costs associated with these actions

#### 5.1e

## Please describe your risks that are driven by changes in other climate-related developments

ID	Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	
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5.1f

Please describe (i) the potential financial implications of the risk before taking action; (ii) the methods you are using to manage this risk; (iii) the costs associated with these actions

## 5.1g

Please explain why you do not consider your company to be exposed to risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

## 5.1h

Please explain why you do not consider your company to be exposed to risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

Based on Ford's assessment of the physical risks associated with climate change, we do not believe we can adequately predict the potential impacts of climate change on our business beyond noting the risk posed by natural or man-made disasters. See our Annual Report on Form 10-K for the year ended December 31, 2012 for additional discussion of the risk factors that could have a substantial impact on our financial condition or results of operations, including risks associated with climate change.

## 5.1i

Please explain why you do not consider your company to be exposed to risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

For the same reasons as provided in 5.1h.

#### Attachments

https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/5.ClimateChangeRisks/FordMotorCompany\_10K\_20130219.pdf

## Page: 6. Climate Change Opportunities

## 6.1

Have you identified any climate change opportunities (current or future) that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation Opportunities driven by changes in other climate-related developments

#### Please describe your opportunities that are driven by changes in regulation

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact
Ford4	Fuel/energy taxes and regulations	Within our logistics operations, our major focus has been on greenhouse gas (GHG) emissions, with two key work streams – GHG emissions reporting and GHG emissions reduction. The fact that freight emissions and fuel usage are so closely tied means that our focus on emissions reduction encourages actions that help us achieve other environmental goals as well, such as improving air quality and reducing traffic flows.	Reduced operational costs	Current	Indirect (Supply chain)	More likely than not	Medium

6.1b

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity and (iii) the costs associated with these actions

Ford has committed to doing its share to stabilize atmospheric CO2 at 450 ppm. Using a science-based CO2 model, we have calculated the amount of light-duty vehicle (LDV) CO2 emissions that are consistent with stabilizing the concentration of CO2 in the atmosphere at this level. We then calculated the long-term, sustained reductions in the CO2 emission rate (g/km) from new LDVs that would be needed to achieve 450 ppm atmospheric CO2, based on projections of vehicle sales and scrappage. Plotting these emission levels over time yields the "CO2 glide paths" that drive our technology plans. We have calculated region-specific CO2 glide paths for North America, Europe, Brazil and China. The glide paths take into account the effects of regional differences in vehicle size and fuel consumption, government regulations and biofuel availability. Although the initial (current) CO2 emissions rate varies considerably by region, to provide the significant emission reductions needed, all regions need to move toward similar targets. For the light-duty vehicle sector to meet the 450 ppm CO2 emissions limits, all automakers must reduce their LDV emissions by the same proportion as prescribed by the CO2 glide paths. We have shared our thinking behind the development of these industry average targets with interested stakeholders and have received positive feedback. We believe that a science-based approach is the right way forward. Ford's sustainability plan is based on these science-based emissions targets. The reductions called for by the glide paths are more aggressive than our previously announced 30 percent reduction goal from 2006 to 2020.

In 2010, we applied the CO2 glide path methodology to develop CO2 targets for our commercial vehicles and facilities. We plan to review our glide path analysis, and update it as appropriate, to incorporate new developments in climate science, new forecasts for vehicle sales and future changes in the CO2 intensity of fuels (e.g., increased use of biofuels, or oil from tar sands). Any significant changes to the glide path will be discussed in future Sustainability Reports.

We annually review the assumptions and input data in the CO2 model. Because of the long-term view of the model, we only update the glide paths on a five-year basis. In 2012 we completed the first update since the glide paths were implemented. As part of this review, we assessed our glide path analysis methodology and incorporated new forecasts for vehicle sales and the latest data on the CO intensity of fuels. The adjustments to glide paths based on these changes were minor.

To explore which vehicle and fuel technologies might be most cost-effective in the long-term stabilization of atmospheric CO2 concentrations, we have worked with colleagues at Chalmers University in Gothenburg, Sweden. Specifically, they have assisted us in including a detailed description of light-duty vehicles in a model of global energy use for 2010 to 2100. Nine technology cost cases were considered. We found that variation in vehicle technology costs over reasonable ranges led to large differences in the vehicle technologies utilized to meet future CO2 stabilization targets. We concluded that, given the large uncertainties in our current knowledge of future vehicle technology costs, it is too early to express any firm opinions about the future cost-effectiveness or optimality of different future fuel and vehicle powertrain technology combinations. This conclusion is reflected in the portfolio of fuel and vehicle technologies that are included in our sustainability strategy. We are continuing to develop the global energy model with researchers at Chalmers. We believe the model will provide valuable insights into cost-effective mobility choices in a future carbon-constrained world.

Ford's physical logistics operations provide safe and efficient transport of parts from our suppliers to our manufacturing plants (our "inbound" freight) and of finished vehicles from the end of our assembly lines to our dealerships (our "outbound" freight). Although logistics account for a relatively small percentage of total vehicle lifecycle emissions, we are working hard to maximize the efficiency of these operations to reduce their environmental impact. Our major focus has been on greenhouse gas (GHG) emissions, with two key work streams – GHG emissions reporting and GHG emissions reduction. The fact that freight emissions and fuel usage are so closely tied means that our focus on emissions reduction encourages actions that help us achieve other goals as well, such as increasing efficiency, reducing costs, improving air quality and reducing traffic flows. The efficient design and operation of our networks is key to improving the environmental footprint of our freight transportation. There is a direct correlation between using greener modes (such as rail and water) and reducing emissions and miles traveled, as well as increasing vehicle utilization.

## 6.1c

Please describe the opportunities that are driven by changes in physical climate parameters

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact

#### 6.1d

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity and (iii) the costs associated with these actions

#### Please describe the opportunities that are driven by changes in other climate-related developments

ID	Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact
Ford5	Changing consumer behaviour	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. Our projected vehicle fleet mix is expected to significantly shift to smaller vehicles and advanced technology powertrains. The Company's product plans are well positioned to accommodate this shift.	Increased demand for existing products/services	1-5 years	Direct	Very likely	Medium- high

#### 6.1f

Please describe (i) the potential financial implications of the opportunity; (ii) the methods you are using to manage this opportunity; (iii) the costs associated with these actions

Ford is taking a portfolio approach to developing sustainable technologies and alternative fuel options. Our goal is to provide consumers with a range of different options that improve fuel economy and overall sustainability while still meeting individual driving needs. We call this strategy the Power of Choice. This has direct implications for our sales volumes and market share, both of which contribute significantly to the Company's overall financial performance.

## 6.1g

Please explain why you do not consider your company to be exposed to opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

## 6.1e

Please explain why you do not consider your company to be exposed to opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

In general, we do not anticipate that our business operations will be directly and significantly impacted by changes in physical climate parameters in the foreseeable future, apart from the other risks and opportunities identified in this response. That said, to respond to the opportunities posed by the climate change issue, our long-term strategy is to do our part within the light duty transportation sector to contribute to climate stabilization by: 1. Continuously reducing the greenhouse gas emissions and energy usage of our operations. 2. Developing the flexibility and capability to market more lower-GHG-emission products, in line with evolving market conditions and consumer demands. 3. 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. Each of these has attendant costs associated with them. The availability of financial resources remains an issue.

### 6.1i

Please explain why you do not consider your company to be exposed to opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

## Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading [Investor]

## Page: 7. Emissions Methodology

#### 7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Fri 01 Jan 2010 - Fri 31 Dec 2010	1641944	3590736

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
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

7.2a

If you have selected "Other", please provide details below

## 7.3

Please give the source for the global warming potentials you have used

Gas	Reference
Other: Carbon dioxide	Other: IPCC 2006

## Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Anthracite	2624.61	Other: kg per metric tonne	WRI
Distillate fuel oil No 2	3186.3	Other: kg per metric tonne	WRI
Natural gas	2692.8	Other: kg per metric tonne	WRI
Propane	2984.63	Other: kg per metric tonne	WRI

## Page: 8. Emissions Data - (1 Jan 2012 - 31 Dec 2012)

8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

## 8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

1698799

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

#### 3440338

## 8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions which are not included in your disclosure?

## No

8.4a

Please complete the table

Source	Scope	Explain why the source is excluded

## 8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
Less than or equal to 2%	Data Gaps	Ford has established comprehensive internal controls including centralized tracking of all emissions data globally, internal procedures for establishing emissions trading strategies and status reports, and central coordination of all CO2-related audits and reporting. This global, centralized approach has supported our participation in facility CO2 initiatives in a more cost-effective and operationally efficient manner. Ford has established global roles and responsibilities and policies and procedures to help ensure compliance with emissions trading initiatives worldwide. Ford adopted the Global Emissions Manager (GEM) database that serves as a central repository for our facilities to consistently input and assess energy and CO2 data. We have found that emissions data management is performed most efficiently when centralized in this manner. We subsequently expanded GEM to include water usage, waste management, and other environmental metrics that support Ford's sustainability objectives. GEM captures the majority of emissions including all of our manufacturing facilities which have robust data included in the GHG inventory. Emissions that are less significant and more difficult to capture, such as, non-manufacturing facilities are included as data becomes available	Less than or equal to 2%	Data Gaps	Ford has established comprehensive internal controls including centralized tracking of all emissions data globally, internal procedures for establishing emissions trading strategies and status reports, and central coordination of all CO2-related audits and reporting. This global, centralized approach has supported our participation in facility CO2 initiatives in a more cost-effective and operationally efficient manner. Ford has established global roles and responsibilities and policies and procedures to help ensure compliance with emissions trading initiatives worldwide. Ford adopted the Global Emissions Manager (GEM) database that serves as a central repository for our facilities to consistently input and assess energy and CO2 data. We have found that emissions data management is performed most efficiently when centralized in this manner. We subsequently expanded GEM to include water usage, waste management, and other environmental metrics that support Ford's sustainability objectives. GEM captures the majority of emissions including all of our manufacturing facilities which have robust data included in the GHG inventory. Emissions that are less significant and more difficult to capture, such as, non-manufacturing facilities are included as data becomes available

Please indicate the verification/assurance status that applies to your Scope 1 emissions

Third party verification or assurance complete

## 8.6a

Please indicate the proportion of your Scope 1 emissions that are verified/assured

More than 60% but less than or equal to 80%

## 8.6b

## Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Attach the document
Reasonable assurance	Other: EC Directive 2003/87/EC Annex V and 2007/589/EC as amended (EU ETS compliance)	https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/Verified emissions report for 2012 (3).pdf
Reasonable assurance	ISO14064-3	https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/Investor-8.6b-C3-RelevantStatement/EY2011 Verification.pdf
Reasonable assurance	The Climate Registry's general verification protocol	

8.6c

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission
------------	--------------------------------------	-------------------	------------------------

## Please indicate the verification/assurance status that applies to your Scope 2 emissions

Third party verification or assurance complete

## 8.7a

Please indicate the proportion of your Scope 2 emissions that are verified/assured

More than 60% but less than or equal to 80%

## 8.7b

## Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Attach the document
Reasonable assurance	ISO14064-3	https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/Investor-8.7b-C3-RelevantStatement/EY2011 Verification.pdf
Reasonable assurance	The Climate Registry's general verification protocol	

#### Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

#### 8.8a

Please provide the emissions in metric tonnes CO2

# Page: 9. Scope 1 Emissions Breakdown - (1 Jan 2012 - 31 Dec 2012)

## 9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

#### 9.1a

Please complete the table below

Country/Region	Scope 1 metric tonnes CO2e	
North America	853614	
South America	73002	
Europe	327477	
Asia Pacific and Africa	99377	

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

## 9.2a

Please break down your total gross global Scope 1 emissions by business division

	Business division	Scope 1 emissions (metric tonnes CO2e)
--	-------------------	--

#### 9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
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## 9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

Please break down your total gross global Scope 1 emissions by activity

Activity Scope 1 emissions (metric tonnes CO2e)

## 9.2e

Please break down your total gross global Scope 1 emissions by legal structure

Legal structure	Scope 1 emissions (metric tonnes CO2e)
-----------------	--

# Page: 10. Scope 2 Emissions Breakdown - (1 Jan 2012 - 31 Dec 2012)

## 10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

## 10.1a

Please complete the table below

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling (MWh)
North America	2158780		
South America	62864		
Europe	613881		

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling (MWh)
Asia Pacific and Africa	604813		

10.2

## Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

10.2a

Please break down your total gross global Scope 2 emissions by business division

	Business division	Scope 2 emissions (metric tonnes CO2e)
--	-------------------	--

#### 10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions (metric tonnes CO2e)

## 10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions (metric tonnes CO2e)

## 10.2d

Please break down your total gross global Scope 2 emissions by legal structure

Legal structure	Scope 2 emissions (metric tonnes CO2e)
-----------------	--

# Page: 11. Energy

## 11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

# 11.2

Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Fuel	5280503
Electricity	5058547
Heat	
Steam	827680
Cooling	

### Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Anthracite	42355
Coke oven coke	106899
Diesel/Gas oil	30144
Distillate fuel oil No 2	18684
Natural gas	5023034
Propane	59387

## 11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comments
Tracking instruments, Guarantees of Origin	365000	

#### Attachments

https://www.cdproject.net/sites/2013/95/6595/Investor CDP 2013/Shared Documents/Attachments/InvestorCDP2013/11.Energy/Renewable Energy Certificate\_2012.pdf

## Page: 12. Emissions Performance

# 11.3

How do your absolute emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

## 12.1a

### Please complete the table

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities			
Divestment			
Acquisitions			
Mergers			
Change in output			
Change in methodology			
Change in boundary			
Change in physical operating conditions	100	Increase	Our production increased, which resulted in an increase in CO2 emissions.
Unidentified			
Other			

# 12.2

#### Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.0000384	metric tonnes CO2e	unit total revenue	2.3	Increase	Revenue decreased slightly from 2011 to 2012, while combined scope 1 and 2 emissions increased slightly.

Please describe your gross combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
30.0	metric tonnes CO2e	FTE employee	3.3	Decrease	The year-over-year increase in employment primarily reflects increases in North America and Asia Pacific Africa to support increased production, partially offset by the initiation of personnel-reduction programs in Europe. Efforts to improve the energy efficiency of Ford's plant operations include: Using energy performance contracting as a financing tool to upgrade and replace infrastructure; Replicating Ford's state-of-the-art paint process that eliminates the need for a stand-alone primer application and a curing oven system. This technology, called "Three-Wet," reduces CO2 emissions; Aggressively curtailing energy use during nonproduction periods; Updating facility lighting systems by replacing inefficient high-intensity discharge fixtures with up-to-date fluorescent lights and control systems; Installing automated control systems on plant powerhouses and wastewater treatment equipment to increase energy and process efficiency.

# 12.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.90	metric tonnes CO2e	Other: vehicle produced	1.7	Decrease	Efforts to improve the energy efficiency of Ford's plant operations include: Using energy performance contracting as a financing tool to upgrade and replace infrastructure; Replicating Ford's state-of-the-art paint process that eliminates the need for a stand-alone primer application and a curing oven system. This technology, called "Three-Wet,"

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
					reduces CO2 emissions; Aggressively curtailing energy use during nonproduction periods; Updating facility lighting systems by replacing inefficient high-intensity discharge fixtures with up-to-date fluorescent lights and control systems; Installing automated control systems on plant powerhouses and wastewater treatment equipment to increase energy and process efficiency.

# Page: 13. Emissions Trading

13.1

Do you participate in any emissions trading schemes?

Yes

# 13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
European Union ETS	Sun 01 Jan 2012 - Mon 31 Dec 2012	280590	0	162594	Facilities we own and operate
Other: Carbon Reduction Commitment	Fri 01 Apr 2011 - Sat 31 Mar 2012	0	11000	10887	Facilities we own and operate

#### What is your strategy for complying with the schemes in which you participate or anticipate participating?

Ford's manufacturing CO2 strategy is a combination of energy efficiency improvements and implementation of innovative manufacturing technologies.

Since 2000, Ford has invested more than \$246 million in plant and facility energy-efficiency upgrades. In 2012 alone, we invested more than \$20 million in energyefficiency or related upgrades to our global manufacturing base. We are working across divisions and regions to ensure that energy efficiency is being addressed in our daily operations and incorporated into the manufacturing processes and facilities, as part of our future vehicle program plans.

We are continuing to replicate Ford's state-of-the-art "Three-Wet" paint process. This technology is called "Three-Wet" because the advanced chemical composition of the paint materials used allows for the three layers of paint – primer, base coat and clear coat – to be applied while each layer is still wet, which eliminates the stand-alone primer application and dedicated oven required in the conventional painting process. The Three-Wet process also saves the electricity used by the blowers that are typically needed to circulate massive volumes of air through paint booths, and reduces the amount of natural gas needed to heat the air and ovens. As a result, Three-Wet painting reduces CO2 emissions by 15 to 25 percent and volatile organic compound emissions by 10 percent compared to either conventional high-solids solvent-borne or waterborne systems.

In addition to these environmental benefits, this process maintains industry-leading quality and reduces costs. For example, Three-Wet reduces paint processing time by 20 to 25 percent, which correlates to a significant cost reduction. The paint formulation contains new polymers and other additives to prevent running and sagging during the application and curing processes. Ford's laboratory tests show that this high-solids, solvent-borne paint provides better long-term resistance to chips and scratches than waterborne paint systems. In short, the process delivers reduced costs per vehicle, reduced CO2, improved energy efficiency and improved quality.

Ford initially implemented the Three-Wet process at our Ohio Assembly Plant 2007 in the U.S. Since then, we have expanded implementation across our global operations when we build new facilities or refurbish existing ones.

We have implemented the Three-Wet paint process at facilities in the United States, India, Romania, Mexico, China and Thailand. We now use the Three-Wet system at eight of our facilities globally and are expanding it to an additional four plants (two in North America, one in China and one in Spain). Three-Wet conversion will be considered for plant refurbishment actions being planned in line with the corporate business plan.

We are continuing implementation of a new parts-washing system developed in partnership with our supplier, ABB Robotics. Conventional parts-washing systems remove dirt chemically by spraying parts with high volumes of water and detergent at low pressure. Our new standard system, in contrast, cleans parts mechanically by moving them in front of specialized high-pressure nozzles with a robotic arm. This new system represents a significant leap forward in energy efficiency that also improves quality, flexibility, productivity and cost because it uses a smaller pump and lower operating temperatures. We are now using this technology as standard for all engine and transmission final wash applications globally, ensuring that the energy and cost savings will be realized by all future vehicle programs.

#### 13.1b

## Has your company originated any project-based carbon credits or purchased any within the reporting period?

#### No

## 13.2a

Please complete the table

Credit origination P or credit purchase	Project Project type identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits retired	Purpose, e.g. compliance
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# Page: 14. Scope 3 Emissions

## 14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
Purchased goods and services	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Capital goods	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Fuel-and-energy- related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Upstream transportation and distribution	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions.
Waste generated in operations	Not relevant, explanation				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
	provided				have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Business travel	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Employee commuting	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Upstream leased assets	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Investments	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one elements of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Downstream transportation and distribution	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Processing of sold products	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Use of sold products	Relevant, not yet calculated				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1)

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
End of life treatment of sold products	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Downstream leased assets	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Franchises	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Other (upstream)	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.
Other (downstream)	Not relevant, explanation provided				Ford road-tested the new Scope 3 protocol in 2010 as part of the WRI/WBCSD's development process. Lifecycle analyses conducted by Ford have found that 80 to 90 percent of vehicle-related GHGs are emitted during the Use Phase. Consequently, other Scope 3 emission categories are relatively insignificant in size in comparison to Use Phase emissions. However, Ford is actively working to better understand our Scope 3 impacts, including the carbon footprint of our supply chain. Ford's supply chain GHG survey process began with a pilot project in 2010, and significantly expanded in 2011 to include a wider range of suppliers and commodities. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG). In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following: (1) The GHG intensity of the commodities supplied (2) The nature of the

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Methodology	Percentage of emissions calculated using primary data	Explanation
					business relationship with Ford (3) The geographic footprint of the supplier's global operations. We achieved an overall response rate of 92 percent in 2012. The direct supplier emissions we assess in our current supplier GHG surveys are only one element of the WRI/WBCSD Scope 3 standard. However, we are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.

## 14.2

# Please indicate the verification/assurance status that applies to your Scope 3 emissions

No third party verification or assurance

#### 14.2a

Please indicate the proportion of your Scope 3 emissions that are verified/assured

# 14.2b

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Relevant standard	Attach the document
-----------------------------------	-------------------	---------------------

14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

No, we don't have any emissions data

14.3a

Please complete the table

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
---------------------------------	-------------------	---------------------------------	---------------------	---------

### 14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers Yes, our customers Yes, other partners in the value chain

#### Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

In 2012, Ford again surveyed our suppliers regarding their GHG emissions. We began these types of surveys with a pilot project in 2010, and significantly expanded it in 2011 to include a wider range of suppliers and commodities. In 2012, we again expanded the program to include more suppliers. Our goal is to better understand the carbon footprint of our supply chain and to use the data to create a broad-based carbon management approach for our supply chain. In 2012, Ford again surveyed suppliers using two separate questionnaires: the Supply Chain Program questionnaire of the Carbon Disclosure Project (CDP), and the GHG survey of the Automotive Industry Action Group (AIAG).

In 2012 we surveyed 135 suppliers, compared to 128 in 2011 and 35 in 2010. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases. Also in 2012, we again included logistics and information technology suppliers in addition to vehicle parts suppliers. Suppliers were chosen to participate based on a variety of criteria, including the following:

The GHG intensity of the commodities supplied

The nature of the business relationship with Ford

The geographic footprint of the supplier's global operations

We achieved an overall response rate of 92 percent in 2012, again exceeding our internal objectives for this round of voluntary surveys.

We are using elements of the WRI/WBCSD Scope 3 standard to assess our full supply chain emissions, to help us develop a comprehensive approach to supply chain emissions management, and to help our suppliers develop GHG management plans. We are currently working to integrate our supplier GHG survey results into a broader analysis of complete Scope 3 GHG emissions.

#### 14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend	Comment
135	50%	In 2012 we surveyed 135 suppliers. The 135 surveyed suppliers account for more than 50 percent of our \$75 billion in annual purchases.

#### 14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data

Please give details

#### 14.4a

How you make use of the data	Please give details
Use in supplier scorecards	Surveyed supplier GHG emission management and data is used by Ford in supplier scorecards and is also being further evaluated to inform a comprehensive supply chain GHG management approach, including evaluation and support for supplier mesasurement and reporting in face of regulation, as well as prioritized opportunities for supplier collaboration on emissions reductions programs and development of low carbon technologies and processes.
Identifying GHG sources to prioritize for reduction actions	See comment 14.4c first row above
Managing physical risks in the supply chain	See comment 14.4c first row above
Managing the impact of regulation in the supply chain	See comment 14.4c first row above
Stimulating innovation of new products	See comment 14.4c first row above

14.4d

Please explain why not and any plans you have to develop an engagement strategy in the future

## **Further Information**

http://corporate.ford.com/microsites/sustainability-report-2012-13/supply-environmental-ghg

http://corporate.ford.com/microsites/sustainability-report-2012-13/supply-environmental-logistics

# Module: Auto component

# Page: AU0 Reference Dates

AU0.1

Please enter the dates of the periods for which you will be providing data in subsequent tables. The years given as column headings in subsequent tables correspond to the year ending dates selected below

Year ending	Date range
2012	Sun 01 Jan 2012 - Mon 31 Dec 2012

## Page: AU1 Sales Volumes

#### AU1.1a

#### Sales of gas/petrol vehicles - Country totals

Country	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated
USA										
W. Europe										
Japan										
China										
India										
Brazil										
Russia										
CEE										
Other										
TOTAL	6597	6553	5407	4817	5524	5695	5668			

## AU1.1b

Sales of gas/petrol vehicles - USA - Passenger Vehicles

	Segment types	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated	
AU1.1	c											
	Sales of gas/p	etrol vehicles	- USA - Light	Trucks & SUV	6							
	Segment types	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated	
AU1.1	d											
	Sales of gas/p	etrol vehicles	- Western Eu	rope								
	Segment types	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated	
AU1.1	e											
	Sales of gas/p	etrol vehicles	- Japan									
	Segment types	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated	

## Companies should provide an explanation if different vehicle segmentation is used or if data is unavailable or commercially sensitive

Sales totals in AU1.1a represent the Company's global sales of all powertrains. We do not track vehicle sales by the segmentation laid out in this survey. Ford does not publically disclose it projected sales, but rather the overall industry by our regional reporting approach of North America, South America, Europe, and Asia, Pacific and Africa.

## AU1.2a

#### Sales of diesel vehicles - Country totals

Country	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated
USA										
W. Europe										
Japan										
China										
India										
Brazil										
Russia										
CEE										
Other										
TOTAL										

## AU1.2b

#### Sales of diesel vehicles - USA

Segment types	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated
Passenger car total										

	Segment type	es	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated	
	Light trucks & SU total	J∨											
AU1.20	C												
	Sales of diesel ve	ehicles	- Europe										
	Segment 2 types 2	2006	2007	2008	2009	2010	2011	2012	2013 estim	ated 2014	estimated	2015 estimated	

## AU1.2d

## Companies should provide an explanation if different vehicle segmentation is used or if data is unavailable or commercially sensitive

Sales totals in AU1.1a represent the Company's global sales of all powertrains. We do not track vehicle sales by the segmentation laid out in this survey. Ford does not publically disclose it projected sales, but rather the overall industry by our regional reporting approach of North America, South America, Europe, and Asia, Pacific and Africa.

## AU1.3a

#### Sales of alternatively-powered vehicles - Country totals

This category includes vehicles powered by Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), fuel cells, compressed air, electricity and hybrids

Country	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated
USA										

Country	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2014 estimated	2015 estimated
W. Europe										
Japan										
China										
India										
Brazil										
Russia										
CEE										
Other										
TOTAL										

#### AU1.3b

Companies should provide an explanation if different vehicle segmentation is used or if data is unavailable or commercially sensitive

Sales totals in AU1.1a represent the Company's global sales of all powertrains. We do not track vehicle sales by the segmentation laid out in this survey. Ford does not publically disclose it projected sales, but rather the overall industry by our regional reporting approach of North America, South America, Europe, and Asia, Pacific and Africa.

#### Page: AU2 Emissions

#### AU2.1

Please explain any historic and anticipated changes in the CO2 emissions profile of vehicles sold (e.g. introduction of clean technologies, changes to sales mix) for the time period 2006-2017

Ford does not publically provide specific information on anticipated changes in the CO2 emissions profile of vehicles sold. However, see http://corporate.ford.com/microsites/sustainability-report-2012-13/environment-products-progress-vehicle for information on strategies Ford is implementing to improve vehicle fuel efficiency.

To meet our climate change goals, we are focused in the near term on implementing the most cost-effective fuel-efficiency technologies across a large volume of our

vehicles, as well as on introducing new products that offer improved fuel efficiency without compromising style or performance. We are concentrating on affordable and near-term sustainable technology solutions that can be used not for hundreds or thousands of cars, but for millions of cars, because that is how Ford can truly make a difference.

For example, we have introduced a wide variety of new engine and transmission technologies – as well as electrical system improvements, weight reductions and aerodynamic improvements – that deliver significant fuel-economy benefits for millions of drivers in the near term. By the end of 2012, we delivered 50 of the 62 planned new or significantly updated powertrains to help us improve fuel economy and reduce carbon dioxide emissions across our global fleet.

Engines: EcoBoost engines, which use gasoline turbocharged direct-injection technology, are the centerpiece of our efforts to improve vehicle fuel efficiency. EcoBoost engines significantly improve fuel economy and reduce CO2 emissions, and provide superior driving performance compared to larger-displacement engines. Because EcoBoost is affordable and can be applied to existing gasoline engines, we can implement it across our vehicle fleet, bringing fuel-efficiency benefits to a wide range of our customers. At year-end 2012, we had produced more than 520,000 EcoBoost engines. By the end of 2013, we will offer EcoBoost engines on 90 percent of our North American and European nameplates, and we continue to migrate them to our other regions.

Transmissions: We have adopted six-speed transmissions across our product portfolio, replacing less-efficient four- and five-speed transmissions, improving fuel economy by up to 9 percent depending on application. We are also improving the performance of all our advanced transmissions by further optimizing their operation with EcoBoost engines and further reducing parasitic losses such as mechanical friction and extraneous hydraulic and fluid pumping, to achieve higher operating efficiency. We are also researching other advanced transmission concepts to support further efficiency improvements. Ninety-eight percent of the transmissions on our vehicles in North America are now advanced six-speed gearboxes. We plan to make advanced eight-plus speed gearboxes available by the end of the decade.

#### Other strategies/technologies that improve fuel economy include:

Auto stop-start technology shuts down the engine when the vehicle is stopped and automatically restarts it before the accelerator pedal is pressed to resume driving. This technology maintains the same vehicle functionality as that offered in a conventional vehicle, but saves the fuel typically wasted when a car is standing and running at idle. Savings vary depending on driving patterns. On average, it improves fuel efficiency by 3.5 percent, but it can improve fuel efficiency even more in city driving. The technology can also reduce tailpipe emissions to zero while the vehicle is stationary – for example, when waiting at a stoplight. By 2016, 90 percent of our vehicle nameplates globally will be available with Auto Start-Stop.

Weight Reduction: We are also working to improve fuel economy by decreasing the weight of our vehicles – in particular by increasing our use of unibody vehicle designs, lighter-weight components and lighter-weight materials. Unibody vehicle designs reduce weight by eliminating the need for the body-on-frame design used in truck-based products. We are also using lightweight materials, such as advanced high-strength steels, aluminum, magnesium, natural fibers, and nano-based materials to reduce vehicle weight.

Aerodynamics: We are optimizing vehicle aerodynamics to improve the fuel economy of our global product lineup. During the development process, we use advanced computer simulations and optimization methods coupled with wind-tunnel testing to create vehicle designs that deliver up to 5 percent better fuel economy. Active Grille Shutter technology is one of our key aerodynamics improvements. It reduces aerodynamic drag by up to 6 percent, thereby increasing fuel economy and reducing CO2 emissions. When fully closed, the reduction in drag means that the Active Grille Shutter can reduce CO2 emissions by 2 percent.

Smaller vehicles: We are launching more small vehicles to provide consumers with another way to get better fuel economy. We have loaded these smaller vehicles with features and options commonly found on larger or luxury vehicles to make them attractive, thus encouraging customers to choose more fuel-efficient cars and

trucks.

#### AU2.2

# Please explain the methodology used to calculate CO2 emissions from sold vehicles and any differences with data published by industry associations or governmental agencies or the methodologies they have used

We follow test procedures for calculating CO2 emissions as defined by the governmental regulatory authorities. As an example, in the U.S. we follow the EPA/NHTSA Light Duty Vehicle Greenhouse Gas Emission and Corporate Average Fuel Economy Standards rulemaking for the 2012-2016 model years. This rule can be found at the link below: http://edocket.access.gpo.gov/2010/pdf/2010-8159.pdf

AU2.3a

# Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for gas/petrol-powered vehicles

Country	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
USA											
W. Europe											
Japan											
China											
India											
Brazil											
Russia											
CEE											
Other											
TOTAL											

## AU2.3b

Segment type	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
Two-seaters											
Sedans mini- compact											
Sedans sub- compact											
Sedans compact											
Sedans mid-size											
Sedans large											
Station wagons small											
Station wagons mid-size											
Station wagons large											
Passenger car total											

Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for gas/petrol-powered vehicles - USA - Passenger vehicles

## AU2.3c

Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for gas/petrol-powered vehicles - USA - Light Trucks & SUVs

:	Segment type	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated

## AU2.3d

Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for gas/petrol-powered vehicles - Western Europe

	Segment type	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
AU2.3	e Sales-weight	ed CO2 em	issions in g	CO2/km or g	CO2/mile fo	r gas/petrol	-powered ve	ehicles - Jap	ban			

Segment type	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated

AU2.3f

Companies should provide an explanation if different vehicle segmentation is used or if data is unavailable or commercially sensitive

Ford treats this data as commercially sensitive/Company Confidential. For detailed public information regarding Ford's 2007-2012 CO2 and Fuel Economy Reporting, please visit: http://corporate.ford.com/microsites/sustainability-report-2012-13/environment-data-economy

## AU2.4a

Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for diesel-powered vehicles - Country totals

Country	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
USA											
W. Europe											
Japan											

Country	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
China											
India											
Brazil											
Russia											
CEE											
Other											
TOTAL											

## AU2.4b

## Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for diesel-powered vehicles - USA

Segment type	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated
Passenger car total											
Light trucks & SUV total											

## AU2.4c

# Sales-weighted CO2 emissions in gCO2/km or gCO2/mile for diesel-powered vehicles - Western Europe

gment ype	Units	2006	2007	2008	2009	2010	2011	2012	2013 estimated	2015 estimated	2017 estimated

Companies should provide an explanation if different vehicle segmentation is used or if data is unavailable or commercially sensitive

Ford treats this data as commercially sensitive/Company Confidential. For detailed public information regarding Ford's 2007-2012 CO2 and Fuel Economy Reporting, please visit: http://corporate.ford.com/microsites/sustainability-report-2012-13/environment-data-economy

#### **Further Information**

Ford treats this data as commercially sensitive/Company Confidential. For detailed public information regarding Ford's 2007-2012 CO2 and Fuel Economy Reporting, please visit: http://corporate.ford.com/microsites/sustainability-report-2012-13/environment-data-economy

#### Page: AU3 Clean Technologies

AU3.1a

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

**Technology Category - ICE** 

Type 2012 2017 estimated

#### AU3.1b

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

**Technology Category - Hybrids** 

Type 2012 2017 estimated

#### AU3.1c

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

**Technology Category - Zero Emissions** 

Туре	2012	2017 estimated
Full electric		

AU3.1d

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

**Technology Category - Transmission** 

Туре	2012	2017 estimated

## AU3.1e

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

Technology Category - Body

Type 2012 2017 estimated

## AU3.1f

Auto-manufacturers only - please give the % of your range of vehicles for which the following technologies are available:

## **Technology Category - Others**

Type 2012 2017 estimated

## AU3.1g

#### Auto-equipment manufacturers only - please select the technology categories that are relevant to your business

#### AU3.1gi

Technology category - ICE - please state if you provide the following technologies

Туре	2012	2017 estimated

## AU3.1gii

Technology category - hybrids - please state if you provide the following technologies

Туре	2012	2017 estimated

#### AU3.1giii

Technology category - zero emissions - please state if you provide the following technologies

Туре	2012	2017 estimated

#### AU3.1giv

Technology category - transmission - please state if you provide the following technologies

Туре	2012	2017 estimated

#### AU3.1gv

Technology category - body - please state if you provide the following technologies

Туре	2012	2017 estimated

#### AU3.1gvi

Technology category - others - please state if you provide the following technologies

Туре	2012	2017 estimated

#### AU3.1h

For both auto manufacturers and auto-equipment manufacturers: please provide an explanation if data cannot be provided according to the proposed nomenclature or if it is unavailable or commercially sensitive

The Company does not currently track technology segmentation percentages as described in this survey as business metrics. However, we do employ the majority of the technologies listed above on some portion of our vehicles. Details of our sustainable technologies and alternative fuels plans can be found by following the links at the following website: http://corporate.ford.com/microsites/sustainability-report-2012-13/environment-products-plan

Module: Sign Off

Page: Sign Off

Please enter the name of the individual that has signed off (approved) the response and their job title

Reporting Manager

CDP