# **Fiat Chrysler Automobiles NV - Climate Change 2019**

## **C0. Introduction**

## **C0.1**

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

Fiat Chrysler Automobiles (FCA) is a global automotive group engaged in designing, engineering, manufacturing, distributing and selling vehicles, components and production systems worldwide through 102 manufacturing facilities and 46 research and development centers. We have operations in more than 40 countries and sell our vehicles directly or through distributors and dealers in more than 135 countries. We design, engineer, manufacture, distribute and sell vehicles for the mass-market under the Abarth, Alfa Romeo, Chrysler, Dodge, Fiat, Fiat Professional, Jeep, Lancia and Ram brands and the SRT performance vehicle designation. For our mass-market vehicle brands, we have centralized design, engineering, development and manufacturing operations, which allow us to efficiently operate on a global scale. We support our vehicle shipments with the sale of related service parts and accessories, as well as service contracts, worldwide under the Mopar brand name for mass-market vehicles. In addition, we design, engineer, manufacture, distribute and sell luxury vehicles under the Maserati brand. We make available retail and dealer financing, leasing and rental services through our subsidiaries, joint ventures and commercial arrangements with third party financial institutions. In addition, we operate in the components and production systems sectors under the Teksid and Comau brands. In the past, FCA operated in the components sector under the Magneti Marelli brand, which has been classified as a discontinued operation in the 2018 FCA Annual Report.

In 2018, we shipped 4.8 million vehicles (including the group’s unconsolidated joint ventures), resulting in Net revenues of €110.4 billion and Net profit of €3.6 billion, of which €3.3 billion was attributable to continuing operations.

## **C0.2**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Start date** | **End date** | **Indicate if you are providing emissions data for past reporting years** | **Select the number of past reporting years you will be providing emissions data for** |
| Row 1 | January 1 2018 | December 31 2018 | No | <Not Applicable> |

## **C0.3**

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

Argentina

Brazil

Canada

China

France

India

Italy

Mexico

Poland

Portugal

Romania

Serbia

Spain

Turkey

United States of America

## **C0.4**

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

EUR

## **C0.5**

### **(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Operational control

## **C-TO0.7/C-TS0.7**

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

Light Duty Vehicles (LDV)

## **C1. Governance**

## **C1.1**

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

Yes

## **C1.1a**

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

|  |  |
| --- | --- |
| **Position of individual(s)** | **Please explain** |
| Board-level committee | The Board of Directors (BoD) as a whole is responsible for the strategy of the Company and given the importance of integrating the Group’s economic choices with those of a social and environmental nature, responsibility for climate change is allocated at the FCA BoD level through 1) the Governance and Sustainability Committee, that is composed of 2) certain members of the Board of Directors. The Governance and Sustainability Committee (a sub-committee of the Board of Directors) is responsible for, among other things, assisting and advising the Board of Directors with: A) monitoring and evaluating reports on the Group’s sustainable development policies and practices, management standards, strategy, performance and governance globally; and B) reviewing, assessing and making recommendations as to strategic guidelines for sustainability-related issues. The Governance and Sustainability Committee reports regularly to the Board of Directors regarding its actions and makes recommendation. |

## **C1.1b**

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

|  |  |  |
| --- | --- | --- |
| **Frequency with which climate-related issues are a scheduled agenda item** | **Governance mechanisms into which climate-related issues are integrated** | **Please explain** |
| Scheduled – some meetings | Reviewing and guiding risk management policies | DESCRIPTION – Due to the nature of the products we produce and sell in the automotive industry, risks posed by climate change cannot be separated from other business risks. The management and mitigation of risks to our business encompass a broad array of possibilities including risks posed by climate change, and whether considering local, regional or global risks, their impact can range from minor to significant. FCA’s Enterprise Risk Management (ERM) model defines a risk as any event that could impact the Company’s ability to achieve its objectives. Our approach to managing those risks is based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and was adapted to the unique needs of the Group. Adhering to the core elements of business planning, execution, monitoring and adapting allows us to manage by making informed, risk-based decisions. The Board's Audit Committee is responsible for assisting and advising the Board of Directors’ oversight of, among others, risk management guidelines and policies. EXAMPLE – In 2018, an enterprise risk assessment was performed, based on a bottom-up approach beginning with the functional areas, and concluded with the review by the regional Risk Management Committee. Regional/company Chief Executive Officers and/or Chief Operating Officers of these operating segments reviewed and approved their respective risk assessments and submitted these results to the central ERM team. The central team consolidated results into a Group report for review and validation with the Global Risk Management Committee and Group Executive Council. As part of the consolidation, significant global focus risks were identified and monitored even through major risk indicators as well as current and go-forward mitigation efforts. Once validated, results were submitted to the Audit Committee, assisting the Board of Directors in their responsibility for strategic oversight of risk management activities. Among key global risks identified in 2018, those ones connected with climate-related issues were related to Regulatory Compliance and Technology Development and Product Launch. These key global risks affect our ability to manage the impact of regulatory compliance with vehicle fuel economy (“FE”), greenhouse gas (“GHG”) and zero emission vehicle (“ZEV”) requirements as well as to develop and launch products with new technologies (e.g., electrification and propulsion, autonomous driving and connected vehicles) to meet regulatory requirements and customer expectations. Each key global focus risk was classified by risk categories and control measures and mitigating actions were subsequently defined for each identified risk. |
| Scheduled – some meetings | Reviewing and guiding strategy  Setting performance objectives  Monitoring implementation and performance of objectives  Monitoring and overseeing progress against goals and targets for addressing climate-related issues | DESCRIPTION – FCA’s sustainability model incorporates the need to implement robust processes as well as strengthen cultural buy-in to simultaneously achieve our economic and social responsibility objectives. The Group has established processes to align our long-term business strategy with the needs of internal and external stakeholders, to assess our ability to meet these targets, and to identify opportunities for improvement. The commitment to sustainability arises from a corporate culture that includes integrity, respect for others and a commitment to community service. In order to implement meaningful sustainability practices and optimize the management of sustainability aspects within the Company, FCA involves every area, every function and every employee, from the top of the management chain to workers in plants and offices around the world. Among several entities within the Group, helping direct a disciplined approach to sustainability management, the Board's Governance and Sustainability Committee is responsible for assisting and advising the Board of Directors with: (vi)monitoring and evaluating reports on the Group’s sustainable development policies and practices, management standards, strategy, performance and governance globally; and (vii)reviewing, assessing and making recommendations as to strategic guidelines for sustainability-related issues, and reviewing the annual Sustainability Report. EXAMPLE – During 2018, the Governance and Sustainability Committee met once with 100 percent attendance of its members at that meeting. The Committee reviewed among others the sustainability achievements. |
| Scheduled – some meetings | Reviewing and guiding major plans of action  Reviewing and guiding business plans | DESCRIPTION – The governance mechanism items checked indicates the level of integration and overlap of general FCA core management topics with climate-related aspects. The Board of Directors as a whole is composed of three executive Directors (i.e., the Chairman and the Chief Executive Officer, and the Chief Financial Officer from April 2019), having responsibility for the day-to-day management of the Company, and nine non-executive Directors, who do not have such day-to-day responsibility within the Company or the Group. It is the responsibility of the non-executive Directors to supervise the policies carried out by the executive Directors and the general affairs of the Company and its affiliated enterprise, including the implementation of the strategy of the Company regarding long-term value creation. With a view to maintaining supervision on the Company, the non-executive Directors regularly discuss FCA’s long-term business plans, the implementation of such plans and the risks associated with such plans with the executive Directors. EXAMPLE – In June 2018, FCA’s leadership presented our 2018-2022 business plan to the financial community in Balocco (Italy). This day-long event, called Capital Markets Day, represented a key milestone for FCA as we communicated our expectations regarding financial targets and the solutions that will help us reach these targets, including electrification, vehicle connectivity and autonomous technology. CO2 compliance strategy communicated at the June 2018 Capital Markets Day outlined technologies and applications being pursued to improve fuel consumption and emissions. The FCA 2018-2022 Business Plan reflects FCA’s commitment to transitioning to a lower-carbon economy as an integral part of our overall strategy. |
| Scheduled – some meetings | Overseeing major capital expenditures, acquisitions and divestitures | DESCRIPTION – The governance mechanism item checked indicate the level of integration and overlap of general FCA core management topics with climate-related aspects. As a Group, FCA is conscious of the effect that our activities and products have on society and the environment, and of our role in developing solutions to reduce our environmental footprint. FCA considers environmental protection as a key consideration to be fostered in the overall approach to business. In planning a new product or new production process, we consider its environmental impact in the context of technical, commercial and economic decisions. New projects include, but are not restricted to, directly managed operations (new product development; new production and other process enhancements; brownfield renovation and greenfield activities; mergers and acquisitions) and non-directly managed operations (cooperation and commercial agreements, joint venture partnerships, suppliers, dealers and other business partners). EXAMPLE – One example of how climate-related issues are integrated in strategic decisions for major capital expenditures is the FCA’s Jeep plant in Goiana (Pernambuco State, Brazil). Construction began in September 2012 and FCA dedicated significant in know-how and resources to the construction of the Jeep plant, which can be considered one of the most technologically-advanced and sustainable Group plant in the world. The Pernambuco plant was designed to generate efficiencies and reduce overhead costs by utilizing the Group’s global platforms and reducing its environmental footprint. In 2017, this plant obtained certification as Carbon Neutral, confirmed in 2018. Along with zero waste-to-landfill status since the start of activities in 2015, the plant is almost self-sufficient in terms of water sage, with a 99% water recycling index. Key drivers for carbon neutrality at this plants are: -100% of electric energy consumed is derived from renewable sources - compensation with carbon credits of emissions that cannot be eliminated. |

## **C1.2**

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

|  |  |  |
| --- | --- | --- |
| **Name of the position(s) and/or committee(s)** | **Responsibility** | **Frequency of reporting to the board on climate-related issues** |
| Other C-Suite Officer, please specify (Group Executive Council (GEC)) | Both assessing and managing climate-related risks and opportunities | More frequently than quarterly |
| Other C-Suite Officer, please specify (Chief Audit, Sustainability and Compliance Officer) | Assessing climate-related risks and opportunities | Annually |
| Chief Financial Officer (CFO) | Assessing climate-related risks and opportunities | As important matters arise |

## **C1.2a**

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

1. On certain key industrial matters, the CEO, who is also a Board member, is supported by the Group Executive Council (GEC), which is responsible for executing the decisions of the CEO and Board of Directors and the day-to-day management of the Company, primarily to the extent it relates to its operational management, including reviewing the operating performance of the businesses and collaborating on certain operational matters. Within the GEC are several positions responsible for assessing and managing climate-related risks and opportunities. The global innovation and product development activities are centrally coordinated by the Chief Technology Officer (CTO). In particular, the CTO leads FCA Research and Development (R&D) and is responsible for stimulating opportunities for synergies and technology transfer across the entire enterprise.The CTO is a member of the GEC and a direct report of the CEO. Historically,we have concentrated the majority of our efficiency research efforts in two areas:reducing vehicle demand energy and reducing fuel consumption and emissions. Fuel consumption and emissions reduction activities have been primarily focused on powertrain technologies including: engines,transmissions and drivelines,hybrid and electric propulsion and alternative fuels. The Powertrain Coordinator is a member of the GEC and has responsibilities for managing the powertrain technologies in 2018. In support of this, the Vehicle Safety and Regulatory Compliance organization reports to the Company’s Chief Technical Compliance Officer (CTCO) who is a GEC member and reported out to the Board of Directors in 2018.

2. The Chief Audit, Sustainability and Compliance Officer, who reports to the CEO, coordinates the activities of the Sustainability Team. On an annual basis, he reports to the Board of Directors, which is composed of both executive and non-executive members, and is responsible for the management and strategic direction of the Group in view of long-term value creation. The Board’s Governance and Sustainability Committee evaluates proposals related to strategic sustainability initiatives, advises the full Board as necessary, and reviews the annual Sustainability Report. The Chief Audit, Sustainability and Compliance Officer is also a member of the Group Executive Council (GEC), the GEC approves operating guidelines and plays a vital role in ensuring that sustainability efforts are aligned with economic and business objectives. Climate-related issues are monitored through sustainability-focused targets and progress monitored toward achievement through a three-phase approach: • Planning Phase: goals are drafted by the Sustainability Team in collaboration with FCA’s operating segments, regions and corporate functions. These proposed targets are submitted to the GEC which evaluates their consistency with the business plan and strategy, and either approves or modifies the targets. • Management Phase: FCA’s various operating segments, regions or corporate functions are accountable for managing projects and achieving the targets. These organizations take responsibility for implementing the initiatives by bringing their unique resources, tools and knowledge to bear in meeting the specific targets. • Control Phase: involves a series of project updates that target owners provide to the Sustainability Team, which in turn informs the GEC of ongoing progress. The FCA Sustainability Report communicates progress toward achievement of these targets to stakeholders on an annual basis.

3. Risk Management Committees are responsible for supporting risk governance in their respective region/sector. A Global Risk Management Committee (GRMC) was established in 2017 to promote a culture of proactive risk monitoring and management by the relevant risk owners throughout the Group. The GRMC is chaired by the Group CFO, who is also a Board member from April 2019, and other members are representatives from the Legal, Risk Management, Internal Audit functions and from business operations. The mission of this Committee is to provide broad process oversight and to facilitate our integrated risk assessment process. In addition, we utilize the operational focus of our existing Product and Commercial Committees to support risk governance. The Product Committee oversees capital investment, engineering and product development, while the Commercial Committee oversees matters related to sales and marketing. Both committees include executive managers from each of the Companies’ brands, all of whom also have separate functional responsibilities across all the brands. Through our integrated approach our various committees support our GEC, CFO, CEO and Board of Directors (through the Audit Committee) with risk oversight. Key global risks identified in 2018, include among others, those connected with climate-related issues: Regulatory Compliance and Technology Development, and Product Launch.

## **C1.3**

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

Yes

## **C1.3a**

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

### **Who is entitled to benefit from these incentives?**

Corporate executive team

### **Types of incentives**

Monetary reward

### **Activity incentivized**

Efficiency target

### **Comment**

The quality of our leadership and their commitment to the Company are fundamental to our success. FCA’s remuneration principles support our business strategy and growth objectives in a diverse and evolving global market. Our remuneration policies are designed to competitively reward the achievement of long-term sustainable performance and to attract, motivate and retain highly qualified executives who are committed to performing their roles in the long-term interest of our shareholders. Given the changing international standards regarding responsible and sound remuneration, a variety of factors are taken into consideration when evaluating compensation, such as the complexity of functions, the scope of responsibilities, the alignment of risks and rewards, national and international legislation and the long-term objectives of the Company and its shareholders. Overall Group sustainability performance (including matters impacting on climate change) is rewarded. A portion of executive compensation is variable, based on goal achievement. The executives responsible for – and therefore whose goals are related to – climate change issues, are consequently measured and compensated based on how well they address those risk areas.

## **C2. Risks and opportunities**

## **C2.1**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **From (years)** | **To (years)** | **Comment** |
| Short-term | 0 | 2 | 0-2 years is the timeframe used to assess impacts of climate-related risks and opportunities in the short term. This timeframe is aligned with the business practices of i) reviewing annual budget and investments; ii) monitoring level of achievements of sustainability targets; iii) annual risk assessment that includes climate change risk. |
| Medium-term | 2 | 5 | 2-5 years is the timeframe used to assess impacts of climate-related risks and opportunities in the medium term. This timeframe is aligned with the time horizon of execution of the FCA 2018-2022 Business Plan. |
| Long-term | 5 | 10 | 5-10 years is the longer timeframe used to assess impacts of climate-related risks and opportunities in the long term. A longer time horizon than 10 years introduces an increasing level of uncertainty and exposure to unpredictable scenarios whose magnitude of impact and frequency of occurrence cannot be precisely estimated, particularly given the rapid shift in technologies and consumer demand that the automotive sector is exposed to. This timeframe is aligned with the time horizon of Pure Risks management as well as compliance with CO2 regulations. |

## **C2.2**

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

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

## **C2.2a**

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Frequency of monitoring** | **How far into the future are risks considered?** | **Comment** |
| Row 1 | Six-monthly or more frequently | >6 years | The 3 primary elements of FCA's globally integrated approach are: the Enterprise Risk Mgmt process, for visibility to key risks that may hinder FCA ability to achieve strategic goals; the Business Continuity Mgmt process, for a structured approach to restoring normal business operations after a major disruption; the Loss Prevention process, to help preventing conditions that could result in property and business interruption losses. Risks encompass a broad array of topics, including among other climate change; regulatory initiatives; industrial accidents; natural disasters; similar exposures in the supply chain. This approach covers both risks and opportunities that might impact FCA continuity of operations and assets. Time horizon considered goes from 0/5 years (Company Level) to max. 10 years (Asset Level) as stated in C2.1. Control measures and comprehensive mitigation actions are monitored throughout the year to ensure that these are relevant and sufficient. |

## **C2.2b**

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

The overall risk management process involves identifying risks - including those posed by climate change - preemptively reducing likelihood of occurrence, developing plans for responding to risks, and securing insurance to cover potential losses.

COMPANY LEVEL – The Group’s risk management Framework is based on the COSO Framework (Committee of Sponsoring Organizations of the Treadway Commission Report) and the principles of the Dutch Corporate Governance Code and consists of a set of policies, procedures and organizational structures aimed at identifying, measuring, managing and monitoring the principal risks to which the Group is exposed. FCA’s Enterprise Risk Management (ERM) risk assessment process identifies and assesses risks that may affect the Group’s ability to achieve its strategic and business objectives. A risk catalogue, with more than 50 risk drivers (including climate change) further broken down into approximately 100 potential events, is utilized for risk identification. In term of SIZE and SCOPE of identified risks, on an annual basis, an enterprise risk assessment is performed, beginning with our operating segments. Risks identified to have high or medium-high levels of potential impact on our organization and to which we have a high or medium-high level of vulnerability based on the mitigating factors within our Group are considered significant risks. Results of the assessment are consolidated into a Group report for review and validation with the Global Risk Management Committee and Group CEO. Relative significance of risks (including those related to climate change) is determined through a risk correlation analysis which considers the interdependencies among risks at high level.

In addition, a monitoring of the most significant risks to the Group is performed along with the current and go-forward mitigation efforts. Once validated, results are discussed with the Audit Committee, assisting the Board of Directors in their responsibility for strategic oversight of risk management activities. Each key global focus risk has been classified by risk categories and control measures and mitigating actions are subsequently defined for each identified risk. When identifying or assessing any risk events including climate-related one, the Company also identifies any substantive impacts that could hinder FCA’s ability to achieve its strategic goals as well as having the potential to generate a substantive change in Group operations, revenue or expenditure, and Brand reputation.

ASSET AND BUSINESS CONTINUITY LEVEL – The Loss Prevention Management process identifies conditions that could result in property and business interruption losses; assigns probability and estimates the impact; implements optimized prevention, protection, and risk transfer countermeasures; and monitors the process for effectiveness. These activities not only focus on the traditional fire and natural hazard risks, but have been extended through innovative risk engineering solutions to several other pure risks expected to increase in the future due to Climate Change.

The Fiat Chrysler Risk Management center of competence which leads the development of loss expectancy scenarios as well as recovery and/or mitigation options, studies how present and future climate may impact flood risk, using hydro-morphological datasets, hydrological modelling techniques and statistical analyses. The goal of the competence center is to reduce the detection time of new natural hazard risk-related events and to quickly initiate loss prevention or mitigation practices and procedures. Its focus is the allocation of resources and efforts among risk reduction, risk sharing, disaster response and recovery efforts. The Loss Prevention Mgmt. process is conducted with the support of external consulting firms that specialize in industrial risk. They use field audits to provide an impartial, in-depth and consistent assessment of risk across the Group.

In term of SIZE and SCOPE of identified risks, during 2018, FCA’s risk management entities were responsible for managing 151 sites worldwide, representing 82% of total insured value, based on 2019 insured values. To ensure that industrial risk is adequately and efficiently monitored, more than 95% of FCA’s total insured value managed is surveyed at least once every 3 years and more than 50% is surveyed annually. In 2018, 77 sites (approximately 81% of FCA’s insured value) and 198 new projects were inspected or monitored to ensure conformity with international standards in loss prevention.

When identifying or assessing any risk events including climate-related one, the Company quantifies the potential finance impact to determine if dedicated investments are justified to put in place risk mitigation countermeasures. Materiality for prioritization is measured as loss expectancy (direct and indirect). Risk is considered a priority when the potential loss/financial impact exceeds € 10 Mio.

## **C2.2c**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance & inclusion** | **Please explain** |
| Current regulation | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – We face a variety of risks in our business. Included in the overall FCA Risk Assessment as described in C2.2b are among others risks of current regulatory restrictions related to climate change (e.g., GHG and CAFE mandates, fuel economy regulations, emissions levels for CO2 and other greenhouse gases) in domestic and international jurisdictions of operation. Current Laws, regulations and governmental policies’ relevance regarding increased fuel economy requirements and reduced greenhouse gas emissions, have a significant effect on how we do business. Additional costs/investment as well as significant management resources, vehicle engineering and design attention could be required to maintain compliance with current regulatory restrictions related to climate change. EXAMPLE OF A SPECIFIC RISK – More specifically, we pursue compliance with fuel economy and greenhouse gas regulations in the markets where we operate through the most cost effective combination of developing, manufacturing and selling vehicles with better fuel economy and lower emissions, purchasing compliance credits and paying regulatory penalties. The cost of each of these components of our strategy has increased and is expected to continue to increase in the future. As the costs of each of these components, particularly the relative costs of each component, change, we intend to adjust our strategies in an effort to maintain the most cost effective means of complying with the regulations. For instance, FCA recently entered into multi-year non-cancellable agreements for purchases of regulatory emissions credits in various jurisdictions with total commitments of €1.8 billion. The purchased credits are expected to be used for compliance years through 2023. |
| Emerging regulation | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – We face a variety of risks in our business. Included in the overall FCA Risk Assessment as described in C2.2b are among others risks of emerging regulatory restrictions related to climate change (e.g., GHG and CAFE mandates, fuel economy regulations, emissions levels for CO2 and other greenhouse gases) in domestic and international jurisdictions of operation. Emerging laws, regulations and governmental policies’ relevance regarding increased fuel economy requirements and reduced greenhouse gas emissions, have a significant effect on how we do business. Additional costs/investment as well as significant management resources, vehicle engineering and design attention could be required to maintain compliance with emerging regulatory restrictions related to climate change. EXAMPLE OF A SPECIFIC RISK – The FCA CO2 compliance strategy communicated at the June 2018 Capital Markets Day outlined technologies and applications being pursued to improve fuel consumption and emissions. FCA announced on June 1, 2018 its intention to offer 12 electrified propulsion systems (battery electric, plug-in hybrid electric, full-hybrid and mild-hybrid) in global architectures spanning the full range of vehicle segments. FCA also announced its intention to offer by 2022, 30 nameplates that will feature one or more of these systems. |
| Technology | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – The global automotive industry is experiencing significant change as a result of evolving regulatory requirements for fuel efficiency, greenhouse gas emissions and other tailpipe emissions and emerging technology changes, such as electrification and autonomous driving. Our future performance depends on our ability to offer innovative, attractive products. Included in the overall FCA Risk Assessment as described in C2.2b are among others risks associated with technological improvements or innovations. The failure to develop and offer innovative, attractive and relevant products on a timely basis that compare favourably to those of our principal competitors, could have a material adverse effect on our business, financial condition and results of operations. Thus, risks associated with technological improvements or innovations are relevant as delays in the development of new technology for electrification as well as in the progress of new technology compared to competitors may result in the inability to create and sell profitable products that meet regulatory requirements and customer expectations. EXAMPLE OF A SPECIFIC RISK – For instance, in view of the transition to a lower-carbon and energy-efficient economic system, increased research focus on autonomous driving technology; collaborative efforts (e.g., Waymo) allow leveraging of capabilities and resources to achieve synergies and economies of scale needed to advance autonomous driving technologies. We are collaborating with Waymo, Google’s self-driving technology company, to integrate its self-driving technology into the Chrysler Pacifica Hybrid. We are also partnering with BMW for Level 3 autonomy and Aptiv for Level 2+ advanced driver assistance retail solutions. |
| Legal | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION– Legal risks are among the operational risks we look to mitigate and are included in the overall FCA Risk Assessment as described in C2.2b. Being subject to private lawsuits and inquiries from regulatory authorities may lead to further enforcement actions as well as penalties or obligations, any of which may have a material adverse effect on our business, results of operations and reputation. Risks related to legal action are relevant because it is possible that the resolution of these matters may adversely affect our reputation with consumers, which may negatively impact demand for our vehicles and could have a material adverse effect on our business, financial condition and results of operations. EXAMPLE OF A SPECIFIC RISK– For instance, on January 10, 2019, we announced that FCA US reached final settlements on civil, environmental and consumer claims with the U.S. Environmental Protection Agency (“EPA”), U.S. Department of Justice, the California Air Resources Board, the State of California, 49 other States and U.S. Customs and Border Protection, for which we have accrued €748 million, of which approximately €350 million will be paid in civil penalties to resolve differences over diesel emissions requirements. We also announced that FCA US had reached settlements in connection with a putative class action on behalf of consumers in connection with which FCA US agreed to pay an average of $2,800 per vehicle for each eligible customer affected by the recall. We remain subject to diesel emissions-related investigations by the U.S. Securities and Exchange Commission and the U.S. Department of Justice, Criminal Division. In addition, we remain subject to a number of related private lawsuits and the potential for additional claims. While we believe that we have made meaningful progress in resolving a significant portion of the emissions related investigations and litigation, the results of the unresolved inquiries and private litigation cannot be predicted at this time. Those inquiries and litigation may lead to further enforcement actions, penalties or damage awards, any of which may have a material adverse effect on our business, results of operations and reputation. |
| Market | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – We believe that choosing the right technology at the right moment is key to our ability to lead the way in the future of transportation, especially now as emerging technologies are revolutionizing the concept of personal mobility. Our future performance depends on our ability to offer innovative, attractive products. Risks related to change in customer expectations/needs and resulting demand is thus included in the overall FCA Risk Assessment as described in C2.2b. The failure to develop and offer innovative, attractive and relevant products on a timely basis that compare favourably to those of our principal competitors could have a material adverse effect on our business, financial condition and results of operations. EXAMPLE OF A SPECIFIC RISK – For instance, a significant technological shift that we are likely to see in the near future is related to low emission vehicles through electrification, which we also addressed in our business plan. Risks associated with this change in customer expectations/needs and resulting demand are relevant as delays in the development of new technology for electrification as well as in the progress of new technology compared to competitors may result in the inability to create and sell profitable products that meet regulatory requirements. Our expectation is to continue reducing CO2 emissions through a combination of technologies aligned to the vehicle mix, consumer needs and regulatory framework in each market. According to the plan announced on June 1, 2018, by 2022 we intend to offer 12 electrified propulsion systems on global architectures spanning the full range of vehicle segments and over 30 vehicle nameplates with electrified solutions. The objectives we have set for the future, together with the significant steps already taken, are clear evidence of our business principles and determination to ensure that the achievement of financial targets goes hand-in-hand with respect for all stakeholders. We also aim to provide our customers with new mobility solutions that fit their changing needs such as the continuous development of subscription based car ownership program announced in 2018. |
| Reputation | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – Among the operational risks we look to mitigate, those relating to external events include reputational risks and are integrated in the overall FCA Risk Assessment as described in C2.2b. Their relevance is explained below. Our business operations and reputation may be impacted by various types of events/stakeholders actions (including claims, lawsuits, and other contingent obligations relating to several matters), related, among others, to emissions and fuel economy which are associated with climate change. The ultimate outcome of such events/claims is uncertain and could have a material adverse effect on our company reputation, financial condition or results of operations. Further, also publicity regarding such investigations and lawsuits, whether or not they have merit, may adversely affect our reputation and the perception of our vehicles with retail customers, which may adversely affect demand for our vehicles, and have, in turn, a material adverse effect on our business, financial condition and results of operations. EXAMPLE OF A SPECIFIC RISK – For example, we remain subject to diesel emissions-related investigations by the U.S. Securities and Exchange Commission and the U.S. Department of Justice, Criminal Division. In addition, we remain subject to a number of related private lawsuits and the potential for additional claims. We have also received inquiries from other regulatory authorities in a number of jurisdictions as they examine the on-road tailpipe emissions of several automakers’ vehicles and, when jurisdictionally appropriate, we continue to cooperate with these governmental agencies and authorities. While we believe that we have made meaningful progress in resolving a significant portion of the emissions related investigations and litigation, the results of the unresolved inquiries and private litigation cannot be predicted at this time. Those inquiries and litigation may lead to further enforcement actions, penalties or damage awards, any of which may have a material adverse effect on our business, results of operations and reputation. |
| Acute physical | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – Included in the overall FCA Risk Assessment as described in C2.2b at asset and business continuity level, among the industrial risks we face, the ones that are becoming more and more important and relevant are the low frequency/high severity natural hazards events. Industrial losses from natural hazards can be caused by flooding, tornadoes and severe storms. Climate change has the potential to further influence the magnitude and frequency of hydrogeological and meteorological disasters and may introduce new hazards in areas unfamiliar with them. EXAMPLE OF A SPECIFIC RISK – Natural hazards can threaten the Group’s physical assets and business continuity. The ability to assess losses and costs associated with natural hazards is essential for better hazard mitigation. This proactive approach will continue to reduce the detection time of newly developing or changing risks, and to promptly adapt the FCA loss prevention and mitigation practices and procedures. Acute physical risks are covered by FCA insurances and are part of the annual reassessment with the insurance companies. Flood events are among the most relevant natural hazards that could affect FCA sites. As of today, FCA Risk Management monitors 151 FCA sites in 19 countries; of these sites 19 are potentially exposed to a low flood risk while 7 are potentially exposed to a higher flood risk across the regions. An effective and objective flood risk assessment requires updated risk maps obtained using advanced modeling tools. To confirm the effectiveness of FCA methodologies, Fiat Chrysler Risk Management has formed a working team consisting of specialists from the loss prevention engineering departments of four recognized insurance and reinsurance global leaders. Enabled by their natural hazard research centers, the reinsurance companies provide mapping tools based on geomorphological satellite imagery and mathematical modeling for the first macro analysis of the risk portfolio. The engineering departments of the insurance companies provide their risk analysis based on visual and instrumental interpretation techniques along with field checks. This methodology for industrial flood risk assessment was applied to 136 sites globally, and identified 78 sites where a second flood risk study is recommended. Nineteen second level studies were completed in 2018. |
| Chronic physical | Relevant, always included | RELEVANCE AND INCLUSION EXPLANATION – Included in the overall FCA Risk Assessment as described in C2.2b at asset and business continuity level, we also face chronic physical risk types, which may impact operations of the Group and its suppliers with an indirect effect on business activity. A broad scientific consensus has concluded that the burning of fossil fuels is a primary driver of global warming, with the potential for significant environmental, economic and social consequences. Evident manifestations may include changes in precipitation patterns and extreme variability in weather patterns. Given the above mentioned relevance of chronic physical risk types, to bolster the Group resilience to chronic physical risks, FCA Risk Management launched several forward-looking and innovative risk engineering approaches and solutions to better understand the impacts of natural hazards and to appropriately respond. EXAMPLE OF A SPECIFIC RISK – For instance, FCA strives to implement strategies that manage both everyday and exceptional risks along the supply chain. The process begins with a simplified, semi-quantitative approach used to prioritize suppliers, which helps focus on those crucial suppliers with the greatest potential impact or loss likelihood to FCA supply chains. A second step entails a methodology and supporting tool that allows FCA to assign a risk management maturity index to the supplier risk management processes. The final step is to work with specialized third-party risk engineering advisors to conduct focused loss prevention audits of targeted suppliers to identify and quantify risks that could impact the supply of components to FCA and develop adequate action plans to mitigate those risks. The methodology and reporting tools enable focused loss prevention supplier audits to be conducted and required information to be collected to: - quantify the potential exposure to FCA - define the fire and natural hazard loss scenarios and quantify the production downtime - estimate the time to restart and time to resource - identify potential equipment bottlenecks, critical equipment and vital Tier 2 or 3 suppliers. This methodology was applied to 52 suppliers identified as critical by the Purchasing team. |
| Upstream | Relevant, sometimes included | RELEVANCE AND INCLUSION EXPLANATION - Included in the overall FCA Risk Assessment as described in C2.2b, are those risks deriving from natural disasters, which climate change has the potential to further influence in term of the magnitude and frequency, and given their relevance, may have severe and unpredictable effects on the price of certain raw materials in the future. We face risks associated with increases in costs, disruptions of supply or shortages of raw materials, parts, components and systems used in our vehicles. Substantial increases in the prices for raw materials would increase our operating costs and could reduce profitability if the increased costs cannot be offset by changes in vehicle prices or countered by productivity gains. In particular, certain raw materials are sourced from a limited number of suppliers and from a limited number of countries. We cannot guarantee that we will be able to maintain arrangements with these suppliers that assure access to these raw materials, and in some cases, this access may be affected by factors outside of our control and the control of our suppliers. For instance, natural or man-made disasters or civil unrest may have severe and unpredictable effects on the price and availability of certain raw materials in the future. EXAMPLE OF A SPECIFIC RISK – As we begin to implement various electrified powertrain applications throughout our portfolio in accordance with our business plan, we will also depend on a significant supply of lithium, nickel and cobalt. The prices for these raw materials fluctuate, and market conditions can affect our ability to manage our Cost of revenues over the short term. We will continue to work with suppliers to monitor potential disruptions and shortages and to mitigate the effects of any emerging shortages on our production volumes and revenues. However, there can be no assurances that these events will not have an adverse effect on our production in the future, and any such effect may be material, having an adverse effect on our business, financial condition and results of operations. |
| Downstream | Relevant, sometimes included | RELEVANCE AND INCLUSION EXPLANATION – Included as per their relevance in the overall FCA Risk Assessment, as described in C2.2b, there are among others, risks of downstream regulatory restrictions. Fuel efficiency regulations have increased in several markets. Although we continue to evaluate their specific impact, these regulations could materially adversely affect our business, financial condition and results of operations. EXAMPLE OF A SPECIFIC RISK – For example, in the EMEA region, each automobile manufacturer must meet a specific sales-weighted fleet average target for CO2 emissions as related to vehicle weight. This legislation sets an industry fleet average target of 95 grams of CO2 per kilometer starting in 2020 (130g/km until 2019), which is expected to be achieved through an FCA regulatory compliance plan. In order to promote the sale of ultra-efficient vehicles, automobile manufacturers that sell vehicles emitting less than 50 gr. of CO2 per km earn additional CO2 credits. Furthermore, automobile manufacturers that make use of innovative technologies, or eco-innovations, which improve real-world fuel economy but may not show in the test cycle, such as solar panels or low-emissivity glass, may gain a non-transferable average credit for the manufacturer's fleet of up to seven grams of CO2 per kilometer. In Europe, the Regulation 2019/631, published in April 2019, sets new CO2 emissions targets starting from 2025 and 2030: 15% reduction from 2021 levels in 2025 (both passenger cars and LCV) and a 37.5% reduction for passenger cars and 31% reduction for LCV in 2030 from 2021 levels. A new regulatory test procedure for measuring CO2 emissions and fuel consumption of light duty vehicles, the World harmonized Light vehicles Test Procedure (WLTP), entered into force on September 1, 2018 for all passenger cars. The WLTP is expected to provide CO2 emissions and fuel consumption values that are more representative of real driving conditions and is not currently expected to have a material adverse impact on our compliance strategy. |

## **C2.2d**

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

Risk management is an important business driver and is integral to the achievement of the Group’s long-term business plan.We take an integrated approach to risk management, where RISKS and OPPORTUNITIES assessment are at the core of the leadership team agenda.

Our success as an organization depends on our ability to identify and capitalize on the opportunities generated by our business and the markets in which we compete. By managing the associated risks, we strive to achieve a balance between our goals of growth and return and the related risks.

At the COMPANY LEVEL, the assessment and prioritization process of risks, including those posed by climate change, starts with classification of vulnerability of the business and potential impact on profitability, business continuity and reputation. These elements determine the significance of risks (high/medium/low) and their prioritization. Risks we identify as having high- or medium-levels of potential impact and vulnerability on FCA's objectives and performance are considered significant. The top significant risks are deemed “focus risks”. As part of the process, the management monitors the major indicators as well as current and go-forward mitigation efforts. Once validated, results are discussed with the Audit Committee, assisting the Board of Directors in their responsibility for strategic oversight of risk management activities. Each key global focus risk is classified by the COSO risk categories and corresponding risk factors is assigned.Control measures and mitigating actions are subsequently defined for each identified risk. Through the implementation of this process the TRANSITION RISK "Technology Development and Product Launch" related to our ability to develop and launch products with new technologies (e.g., electrification and propulsion, autonomous driving and connected vehicles) to meet regulatory requirements and customer expectations, has been identified.

In view of the transition to a lower-carbon and energy-efficient economic system, OPPORTUNITIES,which are prioritized based on various factors, including cost/benefit ratios, may arise from increased research focus as well as collaborative efforts which allow leveraging of capabilities and resources to achieve synergies and economies of scale needed to advance technologies expected by consumers.

FCA’s 2018-2022 business plan of June 2018, for instance,describes the challenges and opportunities presented by the advances in autonomous vehicle technology.Our plan involves pursuing a multi-partner strategy and we are collaborating with Waymo, Google’s self-driving technology company, to integrate its self-driving technology into the Chrysler Pacifica Hybrid. Further, we are also partnering with BMW for Level 3 autonomy and Aptiv for Level 2+ advanced driver assistance retail solutions.

At the ASSET LEVEL, Fiat Chrysler Risk Management evaluates weighs and compares various risks using dedicated methodologies and tools, assigning the appropriate priority; and studying in depth the relations between the variable likely to result in losses and their potential impact. Prioritization of each risk are identified through the two drivers of vulnerability and impact, and by using scientific tools to define the most efficient treatment strategy.

Unpredictable events such as natural disasters can disturb production and business processes. This is the case of the increasing trend of losses, over the last decades, due to floods. To confirm the effectiveness of FCA methodologies used to identify and quantify PHYSICAL RISKS deriving from flood exposures, Fiat Chrysler Risk Management has formed a working team consisting of specialists from the loss prevention engineering departments of four recognized insurance and reinsurance global leaders. Enabled by their natural hazard research centers, the reinsurance companies provide mapping tools based on geomorphological satellite imagery and mathematical modeling for the first macro analysis of the risk portfolio. The engineering departments of the insurance companies provide their risk analysis based on visual and instrumental interpretation techniques along with field checks. This methodology for industrial flood risk assessment was applied to 136 sites globally, and identified 78 sites where a second flood risk study is recommended. Nineteen second level studies were completed in 2018.

In 2018,FCA investments in targeted loss prevention and physical risk mitigation measures led to a reduction in overall loss expectancies of approximately €0.94 billion during the year. By taking advantage of the OPPORTUNITY to obtain an efficiency ratio, an overall Global Efficiency Index(GEI = cost of protection/reduction of expected damage)of 2.27 was achieved,representing a reduction of €100 of Loss Expectancy for every €2.27 invested. The Global Efficiency Index for loss mitigation is recognized as a measure of effectiveness for industrial risk management

## **C2.3**

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

Yes

## **C2.3a**

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

### **Identifier**

Risk 1

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

Direct operations

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

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

### **Type of financial impact**

Increased costs and/or reduced demand for products and services resulting from fines and judgments

### **Company- specific description**

Laws, regulations and governmental policies, including those regarding increased fuel efficiency requirements and reduced greenhouse gas and tailpipe emissions, have a significant effect on how we do business. As we seek to comply with government regulations, particularly those related to fuel efficiency, vehicle safety and greenhouse gas and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. We expect the number and scope of these regulatory requirements, along with the costs associated with compliance, to increase significantly in the future, and these costs could be difficult to pass through to consumers. In the EMEA region, each automobile manufacturer must meet a specific sales-weighted fleet average target for CO2 emissions as related to vehicle weight. This legislation sets an industry fleet average target of 95 grams of CO2 per kilometer starting in 2020 (130g/km until 2019), which is expected to be achieved through an FCA regulatory compliance plan. Optimizing powertrain efficiency is part of FCA’s commitment to reduce vehicle CO2 emissions and improve fuel economy. This means not only developing more efficient engines and transmissions, but also optimizing the vehicle/powertrain systems. Selection of the most suitable powertrain is based on vehicle type and use. FCA has implemented a suite of electrification technologies, including: 12-volt engine stop-start, 48-volt mild hybrid, plug-in hybrid, and full battery electric vehicles, all of which offer improvements in fuel economy and a reduction in CO2 emissions. The Regulation (EU) 2019/631, published in April 2019, sets new CO2 emissions targets starting from 2025 and 2030: 15% reduction from 2021 levels in 2025 (both passenger cars and LCV) and a 37.5% reduction for passenger cars and 31% reduction for LCV in 2030 from 2021 levels. A new regulatory test procedure for measuring CO2 emissions and fuel consumption of light duty vehicles, the World harmonized Light vehicles Test Procedure (WLTP), entered into force on Sept. 1, 2018 for all passenger cars. The WLTP is expected to provide CO2 emissions and fuel consumption values that are more representative of real driving conditions and is not currently expected to have a material adverse impact on our compliance strategy.

### **Time horizon**

Medium-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

Medium

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

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

92000000

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

<Not Applicable>

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

<Not Applicable>

### **Explanation of financial impact figure**

Estimated theoretical cost (€92 million) per gram of non-compliance, using the cost of the first gram of exceedance onwards (€95), using a scenario considering the current European fleet, without special purpose vehicles. The actual fine will be based on the number of vehicles sold, fleet composition and CO2 grams per km, and cannot be stated with certainty at the time of this questionnaire submission.

### **Management method**

The EU regulatory framework requires each automobile manufacturer to meet a specific sales-weighted fleet average target for CO2 emissions as related to vehicle weight. FCA is addressing this challenge by improving conventional engines,offering vehicles with alternative fuels and developing alternative propulsion systems such as electric and hybrid technologies. As declared on Capital Markets Day (June 2018),FCA expects to invest more than € 9 billion in electrification for the 2018-2022 business plan. The amount presented in the cell "Cost of management" represents 1/5 of the total amount, calculated by dividing €9 billion for the 5 year timeframe of the Business Plan. By 2022, FCA expects to implement several EV systems such as mHEV, HEV, PHEV and BEV across global vehicle architectures. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022. In November 2018, the Group presented the industrial plan for Italy, which includes the launch of 13 all-new or restyled models during the 2019-2021 period, and the development of new powertrain solutions with a significant focus on hybrid and electric technologies. In addition, under Article 6 of Regulation (EU) 2019/631,Manufacturers may also form a pool to meet their obligations. The use of the pooling agreement gives Manufacturers a certain degree of flexibility. For instance, in 2019, FCA entered into a pooling agreement with Tesla, electric vehicle Manufacturer.

### **Cost of management**

1800000000

### **Comment**

During the Capital Markets Day, FCA presented its plan that includes an expectation to invest €9 billion in the next five years in Electrification. The amount presented in the cell "Cost of management" represents the theoretical annual average global investment calculated by dividing €9 billion at the Group/global level over the 5 year timeframe of the Business Plan.

### **Identifier**

Risk 2

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

Direct operations

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

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

### **Type of financial impact**

Increased costs and/or reduced demand for products and services resulting from fines and judgments

### **Company- specific description**

Laws, regulations and governmental policies, including those regarding increased fuel efficiency requirements and reduced GHG and tailpipe emissions, have a significant effect on how we do business. As we seek to comply with government regulations, particularly those related to fuel efficiency and GHG and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. We expect the number and scope of these regulatory requirements, along with the costs associated with compliance, to increase significantly in the future, and these costs could be difficult to pass through to consumers. In the US, fuel economy and GHG emissions are monitored by, and disclosed to, several regulatory agencies, including the National Highway Traffic Safety Administration (NHTSA), EPA, and California Air Resources Board. Vehicle fuel efficiency is measured by fuel economy expressed in miles per gallon (mpg). EPA and NHTSA have issued two joint final rules governing GHG and fuel economy, respectively, for light-duty vehicles, covering model years 2012 through 2025. This standard is currently undergoing a “mid-term” evaluation and may be modified for the 2021 through 2025 model years. FCA is committed to improving vehicle fuel efficiency and has a target to actively pursue actions in support of the U.S. EPA/NHTSA industry goal and described the plan for achievement of this objective in the 2018-2022 business plan announced in June 2018. This means not only developing more efficient engines and transmissions, but optimizing the vehicle/powertrain systems. Selection of the most suitable powertrain is based on vehicle type and use. FCA has implemented a suite of electrification technologies, including: 12-volt engine stop-start, 48-volt mild hybrid, plug-in hybrid, and full battery electric vehicles, all of which offer improvements in fuel economy and a reduction in CO2, and are offered in the U.S. market. "Magnitude of impact" reported below does not consider the fact that the regulations are currently under review.

### **Time horizon**

Long-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

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

25226600

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

<Not Applicable>

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

<Not Applicable>

### **Explanation of financial impact figure**

For illustrative purposes, the estimated theoretical cost of non-compliance, using a scenario in which around 2.2 million U.S. vehicles (estimated based on 2018 U.S. vehicle sales) are 1/10th of a mile per gallon away from CAFE compliance, in a given year. Using a CAFE civil penalty of $14 per each 1/10th of a mpg that a manufacturer’s fleet average falls short of its compliance obligations. The actual CAFE civil penalty would be based on the number of vehicles produced, fleet composition and mpg, and cannot be stated with certainty at the time of this questionnaire submission. The EPA’s GHG regulation does not have a “fine” penalty structure, compliance must be secure.

### **Management method**

The US regulatory framework requires each automaker to meet an average fleet-wide fuel economy performance of 54.5 mpg by 2025. FCA is addressing this challenge by improving its conventional engines, offering vehicles with alternative fuels and developing alternative propulsion systems such as electric and hybrid technologies. In 2018, FCA launched 3 applications of mild hybrids using belt starter generator technology, which offer improvements in fuel economy and a reduced CO2 emissions. This new 48-volt mild hybrid technology is marketed as “eTorque” in the 2018 Jeep Wrangler and 2019 Ram 1500 3.6 and 5.7-liter. As declared on Capital Markets Day (June 2018) FCA expects to invest more than €9 billion in electrification for the 2018-2022 business plan. The amount presented in the cell "Cost of management" represents 1/5 of the total amount, calculated by dividing €9 billion for the 5 year timeframe of the Business Plan. By 2022, according to the business plan announced in June 2018, FCA expects to implement several EV systems such as mHEV, HEV, PHEV and BEV across global vehicle architectures. The vehicle segments involved in the electrification strategy are small, compact/mid and large. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022. FCA also announced in early 2019, plans to expand production capacity in Michigan,US to grow core brands and electrify selected Jeep vehicles.

### **Cost of management**

1800000000

### **Comment**

During the Capital Markets Day, FCA presented its plan that includes an expectation to invest €9 billion in the next five years in Electrification. The amount presented in the cell "Cost of management" represents the theoretical annual average global investment calculated by dividing €9 billion at the Group/global level over the 5 year timeframe of the business plan

### **Identifier**

Risk 3

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

Direct operations

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

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

### **Type of financial impact**

Increased costs and/or reduced demand for products and services resulting from fines and judgments

### **Company- specific description**

Laws, regulations and governmental policies, including those regarding increased fuel efficiency requirements and reduced greenhouse gas and tailpipe emissions, have a significant effect on how we do business. As we seek to comply with government regulations, particularly those related to fuel efficiency, vehicle safety, greenhouse gas and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. We expect the number and scope of these regulatory requirements, along with the costs associated with compliance, to increase significantly in the future, and these costs could be difficult to pass through to consumers. For example, in Brazil ROTA 2030 is the new regulatory framework for the period 2022-2030 that defines energy efficiency targets from 2022. Being Brazil the main market in LATAM region for vehicle manufacturers and being FCA among the market leaders, this could impact our business in that region.

### **Time horizon**

Medium-term

### **Likelihood**

Unlikely

### **Magnitude of impact**

Low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

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

23000000

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

<Not Applicable>

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

<Not Applicable>

### **Explanation of financial impact figure**

Estimated theoretical cost of non-compliance in 5 years using 2018 Inovar Autoregulatory scheme (Defined in decree: 9.557.18 dated 08/november/2018). Due to this scheme, for all vehicles sold from January 2013 until September 2020, the fine is R$50.00 for the first 0.73 gCO2/km out of the target

### **Management method**

FCA is addressing this challenge by improving our conventional engines, offering vehicles with alternative fuels and developing alternative propulsion systems such as electric and hybrid technologies. In Brazil, the technology implementation rate of high voltage electrification systems is not applied as a result of the high usage of Flexfuel technology and the high percentage of renewable sugar cane ethanol. In Brazil, the major market in the LATAM region, more than 374,000 Flexfuel vehicles were registered in 2018, accounting for approximately 86% of vehicles licensed by the Group in this market. As declared on Capital Markets Day (June 2018), FCA expects to invest €6.75 billion in powertrain technologies over the 5 year timeframe of the Business Plan. The amount presented in the cell "Cost of management" represents 1/5 of the total amount, calculated by dividing 6.75 billion for the 5 year timeframe of the Business Plan.

### **Cost of management**

1350000000

### **Comment**

During the Capital Markets Day, FCA presented its plan that includes an expectation to invest €6,75 billion in the next five years in powertrain development. The amount presented in the cell "Cost of management" represents the theoretical annual average global investment calculated by dividing more than €6 billion at the Group/global level over the 5 year timeframe of the Business Plan.

## **C2.4**

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

Yes

## **C2.4a**

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

### **Identifier**

Opp1

### **Where in the value chain does the opportunity occur?**

Direct operations

### **Opportunity type**

Resource efficiency

### **Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

### **Type of financial impact**

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

### **Company-specific description**

Changes in regulatory framework could represent opportunities for FCA since the Group is managing them in an effective and timely manner. Fuel and energy related taxes and regulation could affect the operational costs of all automakers and thus increase total manufacturing cost. Competitive opportunities may arise for FCA if the Group is able to offset this increase in cost through a decrease in its energy consumption higher than that of its competitors, for instance through FCA’s World Class Manufacturing (WCM) program, a structured production system that promotes sustainable, systematic improvements aimed to evaluate and address all types of wastes and losses at our manufacturing operations by applying methods and standards with rigor. WCM has been adopted by FCA since 2006.

### **Time horizon**

Short-term

### **Likelihood**

Likely

### **Magnitude of impact**

Medium-low

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

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

38000000

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

<Not Applicable>

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

<Not Applicable>

### **Explanation of financial impact figure**

Any reduction in energy consumption contributes to the reduction of operating costs. The World Class Manufacturing (WCM) program, implemented at 95 Group plants worldwide, in the last 8 years led to savings of 17% of energy per vehicle produced. In 2018, energy related projects saved around €38 million. Energy related costs are less than 5% of total Group operational costs.

### **Strategy to realize opportunity**

Over the past several years, the Group has already implemented energy saving projects according to the methodologies developed by World Class Manufacturing (WCM). The objective of the WCM program implemented by FCA worldwide is to eliminate all forms of waste throughout the production process. WCM implementation in FCA’s plants covers 99% of total Group manufacturing cost base with 65 plants already recognized as WCM Gold, Silver or Bronze level. Important results in energy savings and CO2 reduction have already been achieved, due to the many initiatives implemented and the know-how gained in managing the production processes. In 2018, mass-market assembly and stamping plants worldwide registered a 27% decrease (vs the 2010 baseline) in CO2 emissions per vehicle produced, and a decrease of 17% in energy consumption per vehicle produced thus contributing to enhance during the year the likelihood and magnitude of financial opportunity linked to energy savings. One example could be the transmission plant in Verrone (Italy), which achieved WCM Gold level. As a result of the level of skill and involvement of personnel, it has reduced manufacturing costs. In 2018 capital costs directly linked to the implementation of energy efficiency initiatives at existing plants totaled over €12 million.

### **Cost to realize opportunity**

14600000

### **Comment**

### **Identifier**

Opp2

### **Where in the value chain does the opportunity occur?**

Customer

### **Opportunity type**

Products and services

### **Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

### **Type of financial impact**

Increased revenue through demand for lower emissions products and services

### **Company-specific description**

Low emission technologies are constantly being encouraged through regulations that impose new standards or support sales through potential fiscal incentives. Climate change is generating new market opportunities, based on growing environmental consciousness among consumers. Public and private companies are also paying greater attention to fuel efficiency and emissions of the vehicles they purchase and are including environmental requirements in fleet tenders. The ability to take advantage of these opportunities is relevant for the future of the North American automotive market. FCA is already responding to this opportunity with a growing offering of low-emission products. As declared on Capital Markets Day (June 2018), FCA expects to invest more than €9 billion in electrification for the 2018-2022 business plan. By 2022, FCA expects to implement several EV systems, such as mHEV, HEV, PHEV and BEV, across global vehicle architectures. The vehicle segments involved in the electrification strategy are small, compact/mid, and large. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022.

### **Time horizon**

Medium-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium-high

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

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

723840000

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

<Not Applicable>

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

<Not Applicable>

### **Explanation of financial impact figure**

The main financial impact of this opportunity is represented by the increase in sales of more low-carbon vehicles like electric and hybrid vehicles. Based on 2018 revenues, an increase of 1% in North America sales due to development and/or expansion of low emission goods and services may result in an increase in net revenues upwards of €720 million, not considering potential production capacity constraints, segment/model dependency and any other factor or variable that may influence this range.

### **Strategy to realize opportunity**

FCA has a commitment to minimize the environmental impacts from our products by reducing CO2 emissions and improving fuel economy. This includes a target/focus on developing electric/hybrid technologies, focusing on solutions that are economically viable, competitive in the marketplace, and beneficial to society. FCA addresses this commitment by: • Developing electrification technologies, like the Chrysler Pacifica Hybrid (PHEV) and a mild hybrid system using belt starter generator technology which offers improvements in fuel economy and a reduction in CO2 emissions (eTorque mild hybrid system available in the 2018 Jeep Wrangler and 2019 Ram 1500) • Expecting to offer one or more EV systems (such as mHEV, HEV, PHEV and BEV) on over 30 nameplates by 2022, according to the business plan announced in June 2018 • Supporting Waymo, Google’s self-driving car company, in launching the world’s first driverless ride-hailing service by supplying thousands more Chrysler Pacifica Hybrid minivans. In addition, FCA announced in early 2019, plans to expand production capacity in Michigan, USA to grow core brands and electrify selected Jeep vehicles. During the Capital Markets Day, FCA presented its plan that includes expectations to invest €9 billion in the next five years in Electrification. €1.8 billion represents the theoretical annual average global investment calculated by dividing €9 billion at the Group/global level over the 5 year timeframe of the Business Plan.

### **Cost to realize opportunity**

1800000000

### **Comment**

### **Identifier**

Opp3

### **Where in the value chain does the opportunity occur?**

Customer

### **Opportunity type**

Products and services

### **Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

### **Type of financial impact**

Increased revenue through demand for lower emissions products and services

### **Company-specific description**

Low emission technologies are constantly being encouraged through regulations that impose new standards or support sales through potential fiscal incentives. Climate change is generating new market opportunities, based on growing environmental consciousness among consumers. Public and private companies are also paying greater attention to fuel efficiency and emissions of the vehicles they purchase and are including environmental requirements in fleet tenders. The ability to take advantage of these opportunities is relevant for the future of the European automotive market. FCA is ready to respond to this opportunity with a wide range of low-emission products. As declared on Capital Markets Day (June 2018), FCA expects to invest more than €9 billion in electrification for the 2018-2022 business plan. By 2022, FCA expects to implement several EV systems, such as mHEV, HEV, PHEV and BEV, across global vehicle architectures. The vehicle segments involved in the electrification strategy are small, compact/mid, and large. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022.

### **Time horizon**

Medium-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium-high

### **Are you able to provide a potential financial impact figure?**

Yes, an estimated range

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

<Not Applicable>

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

200000000

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

250000000

### **Explanation of financial impact figure**

The main financial implication of this opportunity is represented by the increase in sales of more ecological, flexible and efficient vehicles, for example: electric and hybrid vehicles. Based on 2018 revenues, an increase of 1% in EMEA region sales due to development and/or expansion of low emission goods and services may result in an increase in net revenues between €200 and €250 million, not considering potential production capacity constraints, segment/model dependency and any other factor and variable that may influence this range.

### **Strategy to realize opportunity**

FCA’s approach to providing mobility solutions strives to minimize the impact the environment. Included in FCA’s electrification roll-out is the Jeep Renegade Plug-in Hybrid Electric Vehicle (PHEV) that has been scheduled for market launch in early 2020. The Jeep Renegade PHEV will be produced at the Melfi plant (Italy). Leveraging the already installed vehicle platform and PHEV elements that underpin Jeep Renegade, the European Jeep Compass also will be produced at the Melfi plant. Both vehicles were presented at the 2019 Geneva International Motor Show. Applying the same flexible platform and PHEV technology, activities will also commence to prepare the Pomigliano plant (Italy) to produce an Alfa Romeo Compact Utility Vehicle (CUV). A Fiat Panda Mild Hybrid Vehicle (MHV) will also be launched in Pomigliano. FCA also announced the installation of a full Battery Electric Vehicle (BEV) platform applied on the new Fiat 500, capable of scaling to other applications worldwide. The new Fiat 500 BEV will be manufactured at the FCA Mirafiori plant (Italy). During the Capital Markets Day, FCA presented its plan that includes expectations to invest €9 billion in the next five years in Electrification. €1.8 billion represents the theoretical annual average global investment calculated by dividing €9 billion at the Group/global level over the 5 year timeframe of the Business Plan.

### **Cost to realize opportunity**

1800000000

### **Comment**

During the Capital Markets Day, FCA presented its plan that includes expectations to invest €9 billion in the next five years in Electrification. The amount presented in the cell "Cost to realize opportunity" represents the theoretical annual average global investment calculated by dividing €9 billion at the Group/global level over the 5 year timeframe of the Business Plan.

## **C2.5**

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

|  |  |  |
| --- | --- | --- |
|  | **Impact** | **Description** |
| Products and services | Impacted | The regulatory environment outlook across our four major regions shows continued consistent CO2 reductions, ranging from 25-30 percent between 2018 and 2024. This anticipated regulatory stringency balanced with customer preferences guides research and development for future products. We pursue compliance with fuel economy and greenhouse gas regulations in the markets where we operate through the most cost effective combination of developing, manufacturing and selling vehicles with better fuel economy and lower emissions, purchasing compliance credits and paying regulatory penalties. The cost of each of these components of our strategy has increased and is expected to continue to increase in the future. As the costs of each of these components, particularly the relative costs of each component, changes, we intend to adjust our strategies in an effort to maintain the most cost effective means of complying with the regulations. On June 1, 2018, FCA revealed the new 2018-2022 business plan, which presented our expectation to continue reducing CO2 emissions through a collection of technologies that will vary by market, aligning with the vehicle mix, consumer needs and the regulatory framework. The plan anticipates that we will offer 12 electrified propulsion systems (battery electric, plug-in hybrid electric, full-hybrid and mild-hybrid) in global architectures spanning the full range of vehicle segments. FCA also announced in the plan revealed on June 1, 2018 its intention to offer one or more of these systems on over 30 nameplates worldwide by 2022. FCA has implemented a suite of electrification technologies, including: 12 volt engine stop/start, 48 volt mild hybrid, plug-in hybrid, and full battery electric vehicles. In 2018 FCA launched three applications of mild hybrids using belt starter generator (“BSG”) technology. BSG technology offers improvements in fuel economy and a reduction in CO2 emissions. This new 48 volt mild hybrid technology is marketed as “eTorque” in the all-new 2018 Jeep Wrangler equipped with the 2.0L turbo engine and the all-new 2019 Ram 1500 5.7L and 3.6L applications. MAGNITUDE OF IMPACT: the magnitude of impact on the business could be considered "high". |
| Supply chain and/or value chain | Impacted for some suppliers, facilities, or product lines | Historically at FCA the purchase of raw materials, parts and components have accounted for 70-80 percent of total Cost of revenues. Of these purchases, 10-15 percent relate to the cost of raw materials, including steel, rubber, aluminum, resin, copper, lead, and precious metals (including platinum, palladium and rhodium). We value our relationships with suppliers, and in recent years, we have worked to establish closer ties with a significantly reduced number of suppliers by selecting those that enjoy a leading position in the relevant markets. Although we have not experienced any major loss of production as a result of material or parts shortages in recent years, we are at risk of production delays and lost production should any supplier fail to deliver goods and services on time. Supply of raw materials, parts and components may also be disrupted or interrupted by natural disasters, which are more likely to happen due to climate change. In such circumstances, we work proactively with our suppliers to identify material and part shortages and take steps to mitigate their impact by deploying additional personnel, accessing alternative sources of supply and managing our production schedules. We also continue to refine our processes to identify emerging capacity constraints in the supplier tiers given the ramp up in manufacturing volumes to meet our volume targets. Furthermore, we continuously monitor supplier performance according to key metrics such as part quality, delivery, performance, financial solvency and sustainability. MAGNITUDE OF IMPACT: any interruption in the supply or any increase in the cost of raw materials, parts, components and systems could negatively impact our ability to achieve our vehicle shipment objectives and profitability. The potential magnitude of impact of an interruption is particularly high in instances where a part or component is sourced exclusively from a single supplier. Long-term interruptions in supply of raw materials, parts, components and systems may result in a material impact on vehicle production, vehicle shipment objectives, and profitability. Cost increases which cannot be recouped through increases in vehicle prices, or countered by productivity gains, could have a material adverse effect on our business, financial condition and results of operations. |
| Adaptation and mitigation activities | Impacted for some suppliers, facilities, or product lines | Natural hazards can threaten the Group’s physical assets and business continuity. Industrial losses from natural disasters such as flooding, tornadoes or severe storms, are on the rise. Climate change will further alter the magnitude and frequency of these incidents, and may introduce new hazards in areas that have not previously experienced them. FCA employs a risk management policy strongly focused on loss prevention and mitigation to help prevent property damage that could result in interruptions to our business. To be effective, loss prevention must be embedded in day-to-day activities, in new projects and initiatives, and is supported and promoted by the organization’s highest levels of management. Specific activities include monitoring and insuring against pure risks - such as fire, explosions, and natural disasters - and playing a central role in managing events that have the potential to impact the continuity of operations or integrity of physical assets at the Group’s 1,033 sites worldwide covered by the insurance programs. MAGNITUDE OF IMPACT: In 2018, FCA invested €21.2 million in targeted loss prevention and physical risk mitigation measures that led to a reduction in overall loss expectancies of approximately €0.94 billion during the year. To bolster the sustainability and resilience of the Group, the risk management function launched several forward-looking and innovative risk engineering approaches and solutions to better understand the impacts of natural hazards and respond appropriately. The ability to assess losses and costs associated with natural hazards is essential for better hazard mitigation. This proactive approach will continue to reduce the detection time of newly developing or changing risks, and to promptly adapt the FCA loss prevention and mitigation practices and procedures. |
| Investment in R&D | Impacted | As we seek to comply with government regulations, particularly those related to fuel efficiency, vehicle safety and greenhouse gas and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. Important areas of focus for the Group’s research and development activities and business plan announced on June 1, 2018 include: > continuing to invest in a suite of technical solutions to keep pace with evolving regulatory requirements in each region; > expecting to offer more than 30 vehicle nameplates that are expected to utilize one or more of the EV systems by 2022; > continuing to collaborate and partner with technology and auto industry leaders. MAGNITUDE OF IMPACT: in 2018, the Group invested approximately €3.5 billion in research and development, including those related to fuel efficiency and GHG emissions, representing around 3.2% of net revenues from industrial operations. Approximately 18,000 employees at 46 locations worldwide were involved in the Group’s innovation activities, continuing to generate a significant intellectual property portfolio. At year-end 2018, FCA had 5,726 patents and patent applications, and 1,941 protected product designs. |
| Operations | Impacted for some suppliers, facilities, or product lines | As we seek to comply with government regulations, particularly those related to fuel efficiency, vehicle safety and greenhouse gas and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. Included in FCA’s electrification roll-out is the Jeep Renegade Plug-in Hybrid Electric Vehicle (PHEV) that has been scheduled for market launch in early 2020. The Jeep Renegade PHEV will be produced at the Melfi plant (Italy). Leveraging the already installed vehicle platform and PHEV elements that underpin Jeep Renegade, the European Jeep Compass also will be produced at the Melfi plant. Applying the same flexible platform and PHEV technology, activities will also commence to prepare the Pomigliano plant (Italy) to produce an Alfa Romeo Compact Utility Vehicle (CUV). A Fiat Panda Mild Hybrid Vehicle (MHV) will also be launched in Pomigliano. FCA also announced the installation of a full Battery Electric Vehicle (BEV) platform applied on the new Fiat 500, capable of scaling to other applications worldwide. The new Fiat 500 BEV will be manufactured at the FCA Mirafiori plant (Italy). Investment in Italy over the 2018-2021 period will total more than €5 billion. MAGNITUDE OF IMPACT: some FCA plants have already been refurbished due to change in production and in February 2019, FCA announced plans to invest a total of $4.5 billion in five of our existing U.S. plants, and to work on building a new assembly plant in the city of Detroit. This action would increase capacity to meet growing demand for our Jeep and Ram brands, including production of two new Jeep-branded white space vehicles, as well as electrified models. |
| Other, please specify | Not evaluated | No other impacts evaluated/identified |

## **C2.6**

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

|  |  |  |
| --- | --- | --- |
|  | **Relevance** | **Description** |
| Revenues | Impacted | FCA has implemented a suite of electrification technologies, including: 12 volt engine stop/start, 48 volt mild hybrid, plug-in hybrid, and full battery electric vehicles. The 12 volt stop/start system turns off the engine and fuel flow automatically when the vehicle comes to a halt and re-starts the engine upon the driver disengaging the brake. Phase-in of this technology began in 2013 model year and in 2018 was used in approximately 42 percent of FCA’s global production volume. In 2018 FCA launched three applications of mild hybrids using belt starter generator (“BSG”) technology. BSG technology offers improvements in fuel economy and a reduction in CO2 emissions. This new 48 volt mild hybrid technology is marketed as “eTorque” in the all-new 2018 Jeep Wrangler equipped with the 2.0L turbo engine and the all-new 2019 Ram 1500 5.7L and 3.6L applications. The Fiat 500e is FCA’s full electric vehicle offering and is available only in the NAFTA market. Since its introduction in the 2013 model year approximately 25,000 units have been sold. The Chrysler Pacifica Hybrid, launched in the North America market in 2016, was launched in China in April 2018, contributing to the fuel efficient technologies FCA offers in the region. FCA is among the EU-market leaders in compressed natural gas (“CNG”) propulsion. From 1997 to 2018, the Company’s output of CNG-powered vehicles in Europe exceeded 750,000 vehicles. The magnitude of the impact on the business could be considered "high." |
| Operating costs | Impacted | The Group seeks solutions in our manufacturing processes that enable further reductions in our energy consumption, with a particular focus on decreasing the use of fossil fuels. Over time, these solutions have generated significant savings in energy-related costs. During 2018, the Group rolled out approximately 3,500 projects to improve the energy efficiency of systems and equipment; to implement organizational measures such as process redesign and optimization of plant capacity; and to increase energy awareness among employees. MAGNITUDE OF IMPACT: these initiatives resulted in energy savings of approximately 1,800 TJ and approximately €38 million, in addition to avoiding approximately 145,000 tons of CO2 emissions. |
| Capital expenditures / capital allocation | Impacted | As we seek to comply with government regulations, particularly those related to fuel efficiency, vehicle safety and greenhouse gas and tailpipe emissions standards, we must devote significant financial and management resources, as well as vehicle engineering and design attention, to these legal requirements. Important areas of focus for the Group’s research and development activities and business plan announced on June 1, 2018 include: > continuing to invest in a suite of technical solutions to keep pace with evolving regulatory requirements in each region; > expecting to offer more than 30 vehicle nameplates that are expected to utilize one or more of the EV systems by 2022; > continuing to collaborate and partner with technology and auto industry leaders. MAGNITUDE OF IMPACT: in 2018, the Group invested approximately €3.5 billion in research and development, representing around 3.2% of net revenues from industrial operations. We conduct research and development for new vehicles and technology to improve the performance, safety, fuel efficiency, reliability, consumer perception and environmental impact of our vehicles. Research and development costs consist primarily of material costs, services and personnel related expenses that support the development of new and existing vehicles with powertrain technologies. The increase in amortization of capitalized development expenditure in 2018 compared to 2017 was primarily attributable to the all-new Ram 1500, all-new Jeep Wrangler and the new Jeep Cherokee. We make capital investments in the regions in which we operate primarily related to initiatives to introduce new products, including for electrification and autonomous driving, enhance manufacturing efficiency, improve capacity and for maintenance, and for regulatory and environmental compliance. Our capital expenditures in 2019 are expected to be approximately €8.5 billion. Average spending over 2018-2022 business plan period projected to be approximately 7% of Net revenues (2018-2022 business plan announced in June 2018). (see: www.fcagroup.com/capitalmarketsday/Presentations/FCA%20June%201%202018%20CMD\_BP%20Financial%20Overview.pdf slide 14) |
| Acquisitions and divestments | Not yet impacted | The automotive industry is exceptionally capital intensive and capital expenditures and research and development requirements in our industry have continued to grow significantly in recent years as we pursue technological innovations and respond to a number of challenges. Compliance with enhanced emissions and safety regulations continue to impose new and increasing capital requirements as does the development of proprietary components. While we continue to implement our business plan, and we believe that our business will continue to grow and our operating margins will continue to improve, if we are unable to reduce our capital requirements either through cooperation or consolidation with other manufacturers, we may not be able to reduce component development costs, optimize manufacturing investments or product allocation and improve utilization of tooling, machinery and equipment, as a result of which our product development and manufacturing costs will continue to restrict our profitability and return on capital. Although there can be no assurance that these challenges can be overcome through large scale integration or product development and manufacturing collaboration, if we are unable to pursue such benefits our returns on capital employed may be impaired which could adversely affect our results of operations and financial condition. The magnitude of the potential/predicted impact on the business could be considered "high" and the timescale could be short-, medium-, or long-term. |
| Access to capital | Impacted | MAGNITUDE OF IMPACT: FCA has signed with the European Investment Bank (“EIB”) a €420 million four-year loan to support Research and Development projects to be implemented by FCA during 2018-2020. These selected projects have a number of key objectives, including electrification technology solutions for hybrid and battery electric vehicles and the development of autonomous driving. Moreover, the Research and Development activities will be dedicated to the application of connectivity technologies for the offering of telematics services for the FCA product line up. The Research and Development projects also include the development of digital technologies to be deployed in manufacturing processes. For details see: https://www.fcagroup.com/en-US/media\_center/fca\_press\_release/2018/june/Pages/FCA\_EIB\_EUR\_420\_million\_loan\_for\_RD\_projects.aspx |
| Assets | Impacted for some suppliers, facilities, or product lines | Natural hazards can threaten the Group’s physical assets and business continuity. Industrial losses from natural disasters such as flooding, tornadoes or severe storms, are on the rise. Climate change will further alter the magnitude and frequency of these incidents, and may introduce new hazards in areas that have not previously experienced them. FCA employs a risk management policy strongly focused on loss prevention and mitigation to help prevent property damage that could result in interruptions to our business. To be effective, loss prevention must be embedded in day-to-day activities, in new projects and initiatives, and is supported and promoted by the organization’s highest levels of management. MAGNITUDE OF IMPACT: specific activities include monitoring and insuring against pure risks - such as fire, explosions, and natural disasters - and playing a central role in managing events that have the potential to impact the continuity of operations or integrity of physical assets at the Group’s 1,033 sites worldwide covered by the insurance programs. In 2018, FCA invested €21.2 million in targeted loss prevention and physical risk mitigation measures that led to a reduction in overall loss expectancies of approximately €0.94 billion during the year. To bolster the sustainability and resilience of the Group, the risk management function launched several forward-looking and innovative risk engineering approaches and solutions to better understand the impacts of natural hazards and respond appropriately. The ability to assess losses and costs associated with natural hazards is essential for better hazard mitigation. This proactive approach will continue to reduce the detection time of newly developing or changing risks, and to promptly adapt the FCA loss prevention and mitigation practices and procedures. |
| Liabilities | Impacted | We are involved in various disputes, claims, lawsuits, investigations and other legal proceedings relating to several matters, including product liability, warranty, vehicle safety, emissions and fuel economy, product performance, asbestos, personal injury, dealers, suppliers and other contractual relationships, environment, securities law, labor, antitrust, intellectual property, tax and other matters. We estimate such potential claims and contingent liabilities and, where appropriate, record provisions to address these contingent liabilities. The ultimate outcome of the legal proceedings pending against us is uncertain, and such proceedings could have a material adverse effect on our financial condition or results of operations. Furthermore, additional facts may come to light or we could, in the future, be subject to judgments or enter into settlements of lawsuits and claims that could have a material adverse effect on our business, financial condition and results of operations. While we maintain insurance coverage with respect to certain claims, not all claims or potential losses can be covered by insurance, and even if claims could be covered by insurance, we may not be able to obtain such insurance on acceptable terms in the future, if at all, and any such insurance may not provide adequate coverage against any such claims. MAGNITUDE OF IMPACT: on January 10, 2019, we announced that FCA US reached final settlements on civil environmental and consumer claims with the U.S. Environmental Protection Agency (“EPA”) , U.S. Department of Justice, the California Air Resources Board, the State of California, 49 other States and U.S. Customs and Border Protection, for which we have accrued €748 million. Approximately €350 million of the accrual will be paid in civil penalties to resolve differences over diesel emissions requirements and a portion of the accrual is attributable to settlements reached by FCA US in connection with a putative class action on behalf of consumers in connection with which FCA US agreed to pay an average of $2,800 per vehicle to eligible customers affected by the recall. |
| Other | Not evaluated | No other impacts evaluated/identified |

## **C3. Business Strategy**

## **C3.1**

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

Yes

## **C3.1a**

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

Yes, qualitative

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

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

Yes

## **C3.1c**

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

FCA business objectives incorporate climate change (CC) concerns, among others.

FCA has several concrete examples that illustrate how CC influences business strategy:

> FCA’s 2018-2022 business plan, presented in June 2018 during the FCA Capital Markets Day ([www.fcagroup.com/en-US/investors/Pages/capital\_markets\_day\_2018.aspx](http://www.fcagroup.com/en-US/investors/Pages/capital_markets_day_2018.aspx)) aligns the Company products with consumer demands and regulatory scenarios based on CC scenario forecast by improving vehicle fuel efficiency and reducing CO2 emissions. The business plan announced on June 1, 2018 describes the expected cadence of the CO2 reduction technology plan to utilize one or more EV systems (mHEV, HEV, PHEV and BEV). By 2022, we intend to offer 12 electrified propulsion systems on global architectures spanning the full range of vehicle segments and over 30 vehicle nameplates that are expected to utilize one or more EV systems by 2022 .

See more details in “CO2 Regulatory Compliance“ presentation: [www.fcagroup.com/capitalmarketsday/Presentations/FCA%20June%201%202018%20CMD\_CO2%20Regulatory%20Compliance.pdf](http://www.fcagroup.com/capitalmarketsday/Presentations/FCA%20June%201%202018%20CMD_CO2%20Regulatory%20Compliance.pdf)

> FCA acknowledges the challenges posed by climate change and as a result, has set targets that contribute to the goal of transitioning to a low-carbon future.

Emission and energy reduction targets have been set for both products and processes with target owners identified within the impacted business functions (see pages 23-25, 28: <https://www.fcagroup.com/it-IT/investors/financial_information_reports/sustainability_reports/sustainability_reports/FCA_2018_Sustainability_Report.pdf>)

To reduce the impact of our vehicles, we strive to reduce CO2 emissions and improve fuel economy in response to the unique regulatory requirements of FCA’s major markets. In the European Union (EU), FCA has set a target to achieve a 40% reduction in CO2 emissions by 2020 compared with the baseline of 2006 for mass-market cars sold in Europe. In the U.S., we have targeted actions in support of the U.S. EPA/ NHTSA’s goal of increasing industry year-over-year average fleet wide fuel economy performance. We have set year-over-year fuel economy reduction targets, including the achievement of at least a five to 15% improvement in fuel economy for major renewals of FCA US vehicles compared with replaced vehicles/models. This target has been achieved, and in some cases surpassed, in the years since it was established.

Global goals for our manufacturing plants include reducing CO2 emissions per vehicle produced by 32% from 2010 to 2020

> FCA evaluates the impact of its vehicles on the environment throughout their entire life cycle. We promote the use of Life Cycle Assessment (LCA) tools in order to evaluate the potential impact of our processes and products throughout their lifecycle, from research and design to final dismantling or recycling.

FCA's Environmental Guidelines specify our commitment to address environmental and climate change issues by aiming to: reduce energy consumption through more efficient production processes; limit emissions of greenhouse gases and other pollutants, by reducing the amount of energy we use, implementing innovative technical solutions, and direct and indirect promotion of renewable energy sources; minimize the use of raw materials by promoting renewable and recycled materials in our production processes; encourage the use of reusable and environmentally friendly packaging and containers in order to increase material savings and reduce waste. In planning a new product or new production process, we consider its environmental compatibility in the context of technical, commercial and economic decisions.

The Company has been monitoring and reporting publicly on its environmental impacts and efforts since 1992. Governance of sustainability aspects, including those related to CC, relies on an integrated approach. The Sustainability Team (ST) coordinates sustainability programs at the global level. The ST reports to the Chief Audit, Sustainability and Compliance Officer, who informs directly the Audit Committee and the CEO in his role as Sustainability Coordinator. He is a member of the Group Executive Council, an FCA decision-making body. Responsibility for sustainability also lies at the Board level: the Governance and Sustainability Committee evaluates proposals related to strategic sustainability initiatives, advises the full Board as necessary, and reviews the annual Sustainability Report. Group Risk Management maps strategic risk drivers including those related to CC, such as water scarcity and natural disasters (physical risks) and technology transition and regulatory compliance (transition risks).

As example of substantial business decisions made as a result of the integration of CC into the Company strategy: in 2018, FCA launched three applications of mild hybrids using belt starter generator (BSG) technology. BSG technology offers improvements in fuel economy and a reduction in CO2 emissions.

This new 48-volt mild hybrid technology is marketed as “eTorque” in the all-new 2018 Jeep Wrangler equipped with the 2.0-liter turbo engine and the all-new 2019 Ram 1500 3.6-liter and 5.7-liter applications. The system also delivers significant gains in fuel economy. For example, the 2019 Ram 1500 5.7-liter HEMI V-8 equipped with eTorque has a 13% improvement in city fuel economy and 10% reduction in combined CO2 over the base HEMI in a 4x2 Crew Cab model.

## **C3.1d**

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

|  |  |
| --- | --- |
| **Climate-related scenarios** | **Details** |
| Other, please specify (Science Based Target initiative) | The automotive sector guidance has just been released. FCA is using this guidance to evaluate the development of Science Based Targets. |

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

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

The increase in atmospheric CO2 due to human activity has led many governments to implement control and regulatory measures to limit the resulting effects. FCA believes that effective, long-lasting actions to address Climate Change (CC) can only be achieved through an integrated approach involving energy producers, manufacturers, suppliers, academia, consumers, government and the financial community. CC scenarios are used by regulators first of all, to translate long-term goals such as those of the Paris Agreement into regulatory frameworks for industry to follow.

The Transport industry (which includes passenger cars and light commercial vehicles) is responsible for approximately 24% of global CO2 emissions (source: IEA CO2 statistics, 2016). Based on this awareness, FCA’s steps toward its low-carbon transition plan include investing more than €9 billion in electrification by 2022 to facilitate regulatory compliance in markets of presence. FCA’s CO2 Regulatory Compliance Plan, which is part of the 2018-2022 business plan announced in June 2018, includes the following electrification technology implementation rate expected by 2022:

● EU28: 40% mHEV and 20% high voltage electrification

● US: 15% mHEV and 20% high voltage electrification

● China: 20% mHEV and 15% high voltage electrification

● In Brazil, where ethanol fuel is widely available, FCA’s compliance objectives can be reached without electrification.

The challenge that could inhibit successful implementation of this transition plan to electrification could be the continued limited acceptance among customers of electrified vehicles. Sales of new electric cars worldwide surpassed 2 million units in 2018 (source: “Electric Vehicle Outlook 2019”, Bloomberg NEF) and the need for recharging stations will increase due to the mobility electrification trend.

FCA’s transition plan for a low-carbon strategy also includes collaborating with other players in addressing opportunities to develop new mobility solutions. Customers are increasingly looking for innovative technologies or mobility concepts to meet their evolving transportation needs. To address this, FCA is partnering with BMW for Level 3 autonomy and with Aptiv for Level 2+ advanced driver assistance retail solutions. This collaboration allows the companies to leverage each other’s individual strengths, capabilities and resources. FCA is also exploring other ways through which we can provide these services to our customers.

CC influence on short-term strategy: FCA’s approach focuses on: improving fuel efficiency of vehicle and powertrain technologies, both conventional, electric/hybrid and alternative fuel; developing and promoting new concepts that improve the mobility experience. FCA is collaborating with Waymo, Google’s self-driving technology company, to integrate its self-driving technology into the Chrysler Pacifica Hybrid and accelerate efforts to develop fully self-driving cars; and directly involving drivers in reducing environmental impacts of vehicles during use. In addition to customers, FCA engages other stakeholders, including governments, energy companies and industry peers. FCA also works closely with business partners, i.e., suppliers and dealers, to help them reduce their environmental impact and cut greenhouse gas emissions in the short term (for example, through the CDP Supply Chain program). CC influence on long and medium-term strategy: FCA's targets include: 2025: actively pursue actions in support of the U.S. EPA/NHTSA industry goal of 54.5 mpg; 2020: achieve 40% reduction in CO2 emissions vs 2006 for mass-market vehicle cars sold in Europe; 2020: achieve at least 5% to 15% improvement in fuel economy for major renewals of FCA US vehicles compared with replaced vehicles/models; 2020: develop electric/hybrid technologies, focusing on solutions that are economically viable, competitive in the marketplace, and beneficial to society; and 2020: achieve 32% reduction in CO2 emitted per vehicle produced vs 2010 at mass-market vehicle assembly and stamping plants worldwide.

## **C4. Targets and performance**

## **C4.1**

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

Intensity target

## **C4.1b**

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

### **Target reference number**

Int 1

### **Scope**

Scope 1 +2 (market-based)

### **% emissions in Scope**

61

### **Targeted % reduction from base year**

32

### **Metric**

Metric tons CO2e per vehicle produced\*

### **Base year**

2010

### **Start year**

2014

### **Normalized base year emissions covered by target (metric tons CO2e)**

0.62

### **Target year**

2020

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **% of target achieved**

84

### **Target status**

Underway

### **Please explain**

Target refers to mass-market vehicle assembly and stamping plants, the volume automobile sector of FCA. This represented about 62% of Group 2018 GHG manufacturing emissions. In 2020, absolute emissions are expected to decrease by 3.3% due to efficiencies and despite the expected volume increase. Most decrease in emissions has been achieved by energy efficiency improvements in production processes. We are reporting progress against the same target reported in our previous CDP as Int 1. "% emissions in Scope" was restated from 56% to 61% because FCA boundary exclude Magneti Marelli following the classification of Magneti Marelli as a discontinued operation for the year ended December 31, 2018.

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

-3.3

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

0

### **Target reference number**

Int 2

### **Scope**

Scope 1 +2 (market-based)

### **% emissions in Scope**

84

### **Targeted % reduction from base year**

30

### **Metric**

Metric tons CO2e per vehicle produced\*

### **Base year**

2010

### **Start year**

2014

### **Normalized base year emissions covered by target (metric tons CO2e)**

0.73

### **Target year**

2020

### **Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

### **% of target achieved**

85

### **Target status**

Replaced

### **Please explain**

Target refers to mass-market vehicle assembly, stamping, engines and transmission plants. It is the sum of two existing intensity targets, to achieve at least a 70% coverage. This represented about 83% of Group 2018 GHG manufacturing emissions. In 2020, absolute emissions are expected to decrease by 6.3% due to efficiencies and despite the expected volume increase. Most decrease in emissions has been achieved by energy efficiency improvements in production processes.

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

-4.5

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

0

## **C4.2**

### **(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

## **C4.3**

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

Yes

## **C4.3a**

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

|  |  |  |
| --- | --- | --- |
|  | **Number of initiatives** | **Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked \*)** |
| Under investigation | 0 | 0 |
| To be implemented\* | 4 | 500 |
| Implementation commenced\* | 11700 | 35000 |
| Implemented\* | 27300 | 110000 |
| Not to be implemented | 0 | 0 |

## **C4.3b**

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

### **Initiative type**

Energy efficiency: Building fabric

### **Description of initiative**

Other, please specify (Insulation and maintenance programs)

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

11100

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

2000000

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

1600000

### **Payback period**

<1 year

### **Estimated lifetime of the initiative**

>30 years

### **Comment**

Insulation of buildings; installation of heat recovery technologies to improve temperature control while consuming less energy. The reported initiatives contribute to achieve the targets set in the Sustainability Plan (up to -40% in Scope 1 and Scope 2 CO2 emissions per unit from 2010 to 2020, depending on the Group company). Please note that this row includes the estimated CO2 savings of several hundred projects and is linked mainly (but not only) with indirect energy consumption therefore relates toScope 2 emissions.

### **Initiative type**

Energy efficiency: Building services

### **Description of initiative**

Other, please specify (Combined heat and power, lighting...)

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

31000

### **Scope**

Scope 1

### **Voluntary/Mandatory**

Voluntary

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

5500000

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

3000000

### **Payback period**

<1 year

### **Estimated lifetime of the initiative**

6-10 years

### **Comment**

FCA uses for heating purposes mainly fossil fuel with low-carbon content (natural gas), frequently associated with highly efficient cogeneration facilities. Software for monitoring the energy consumption of computers and lights at selected places has been installed. The reported initiatives contribute to achieve the targets set in the Sustainability Plan (up to -40% in Scope 1 and Scope 2 CO2 emissions per unit from 2010 to 2020, depending on the Group company). Please note that this row includes the estimated CO2 savings of several hundred projects and is linked mainly (but not only) with direct energy consumption therefore relates toScope 1 emissions.

### **Initiative type**

Energy efficiency: Processes

### **Description of initiative**

Other, please specify (heat recovery, refrigeration, process optimization)

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

87000

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

15500000

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

4700000

### **Payback period**

<1 year

### **Estimated lifetime of the initiative**

6-10 years

### **Comment**

In 2018, FCA continued the implementation of activities aimed at reducing energy consumption and CO2 emissions. Energy efficiency projects focused on improvement of heat recovery, refrigeration, process optimization, fuel switch from more pollutant fuels to natural gas and machine replacement, including overhauling or refurbishing equipment in favor of more technologically advanced and efficient solutions. The reported initiatives contribute to achieve the targets set in the Sustainability Plan (up to -40% in Scope 1 and Scope 2 CO2 per unit from 2010 to 2020, depending on the Group company) and were developed mainly on a voluntary basis (more than 75%). Please note that this row includes the estimated CO2 savings of several hundred projects and is linked mainly (but not only) with indirect energy consumption therefore relates toScope 2 emissions.

### **Initiative type**

Other, please specify (Behavioral change)

### **Description of initiative**

<Not Applicable>

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

15900

### **Scope**

Scope 2 (market-based)

### **Voluntary/Mandatory**

Voluntary

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

3000000

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

150000

### **Payback period**

<1 year

### **Estimated lifetime of the initiative**

1-2 years

### **Comment**

Employee training activities and behavioral initiatives at all organizational levels are a key driver for improving the Group’s environmental performance. Competence, knowledge and motivation are essential attributes to ensure a deeply embedded environmental culture throughout the Company. For this reason, a variety of methods are used to spread environmental know-how, promote awareness, and encourage action planning throughout the Group. Training activities were provided to increase employee understanding of their personal impact on the environment. The reported initiatives contribute to achieve the targets set in the Sustainability Plan (up to -40% in Scope 1 and Scope 2 CO2 emissions per unit from 2010 to 2020. Please note that this row includes the estimated CO2 savings of several hundred projects and is linked mainly (but not only) with indirect energy consumption therefore relates toScope 2 emissions.

## **C4.3c**

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

|  |  |
| --- | --- |
| **Method** | **Comment** |
| Lower return on investment (ROI) specification | Employee engagement is one of the cornerstones of World Class Manufacturing (WCM), a structured, rigorous and integrated methodology that applies to production processes. FCA employees worldwide are encouraged to contribute to the Company's success with improvement suggestions. Every suggestion is considered and its potential application evaluated. In 2018 more than 2.4 million employee suggestions were received, covering all WCM topics. These suggestions for projects are evaluated financially by the Cost Deployment pillar of WCM and, if economically sustainable, developed and monitored. |
| Dedicated budget for low-carbon product R&D |  |
| Dedicated budget for energy efficiency |  |
| Compliance with regulatory requirements/standards |  |

## **C4.5**

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

Yes

## **C4.5a**

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

### **Level of aggregation**

Group of products

### **Description of product/Group of products**

FCA considers vehicles equipped with electric propulsion systems to be low-carbon products. This includes: the Fiat 500e, a battery electric vehicle (BEV); Chrysler Pacifica Hybrid (PHEV); and Jeep Wrangler and Ram 1500, both available with eTorque mild hybrid systems. All of these models/vehicles are offered for sale in the U.S. market, with and without electric propulsion systems.

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

Low-carbon product

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

Other, please specify (Internal calculations using U.S. EPA www.fueleconomy.gov )

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

0.2

### **Comment**

In 2018 in the U.S., Fiat 500, Chrysler Pacifica, Jeep Wrangler and Ram 1500 are offered with and without electric propulsion systems, and had combined sales of 900,704. For illustrative purposes, it was assumed that 1% of these vehicles sold in the U.S. are with electric propulsion systems (9,007 vehicles) and considered low-carbon products. FCA sold 4,800,000 vehicles globally in 2018. Dividing the low-carbon vehicles in the U.S. market by the total FCA vehicles sold, the estimated revenues is 0.2% (9,007/4,800,000). The U.S. EPA Fuel Economy data is used to compare each model, with and without electric propulsion systems (www.fueleconomy.gov). For example, Chrysler Pacifica vs Chrysler Pacifica Hybrid (4.6 metric tons CO2/yr per vehicle difference), and so forth. The approximate avoided CO2 for these low-carbon vehicles is more than 13,300 metric tons CO2 per year. FCA’s global research and development activities are aimed at improving the design, performance, safety, fuel efficiency, reliability, consumer perception and sustainability of the Group’s products and services. In 2018, the Group invested approximately €3.5 billion in research and development, representing around 3.2% of net revenues from industrial operations. Approximately 18,000 employees at 46 locations worldwide were involved in the Group’s innovation activities, continuing to generate a significant intellectual property portfolio. Additionally, as declared on Capital Markets Day (June 2018), FCA expects to invest more than €9 billion in electrification for the 2018-2022 business plan. By 2022, FCA expects to implement several EV systems such as mHEV, HEV, PHEV and BEV across global vehicle architectures. The vehicle segments involved in the electrification strategy are small, compact/mid, and large. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022.

## **C5. Emissions methodology**

## **C5.1**

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

### **Scope 1**

### **Base year start**

January 1 2010

### **Base year end**

December 31 2010

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

1075406

### **Comment**

Please note that, to ensure that our base year emissions can be directly compared with our current/reporting year emissions, Scope 1 base year emissions decreased because FCA boundary exclude Magneti Marelli following the classification of Magneti Marelli as a discontinued operation for the year ended December 31, 2018.

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

### **Base year start**

### **Base year end**

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

### **Comment**

### **Scope 2 (market-based)**

### **Base year start**

January 1 2010

### **Base year end**

December 31 2010

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

2882265

### **Comment**

Please note that, to ensure that our base year emissions can be directly compared with our current/reporting year emissions, Scope 2 base year emissions decreased because FCA boundary exclude Magneti Marelli following the classification of Magneti Marelli as a discontinued operation for the year ended December 31, 2018.

## **C5.2**

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

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## **C6. Emissions data**

## **C6.1**

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

### **Reporting year**

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

1129268

### **Start date**

January 1 2018

### **End date**

December 31 2018

### **Comment**

Please note FCA is reporting CO2 and not CO2e. Emissions of greenhouse gases (GHGs) other than CO2 have a negligible impact and therefore are not included (CO2 accounts for over 99% of the Group’s total GHG emissions).

## **C6.2**

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

### **Row 1**

### **​Scope 2, location-based​**

We are reporting a Scope 2, location-based figure

### **Scope 2, market-based**

We are reporting a Scope 2, market-based figure

### **Comment**

## **C6.3**

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

### **Reporting year**

### **Scope 2, location-based**

2795995

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

2470137

### **Start date**

January 1 2018

### **End date**

December 31 2018

### **Comment**

Please note FCA is reporting CO2 and not CO2e. Emissions of greenhouse gases (GHGs) other than CO2 have a negligible impact and therefore are not included (CO2 accounts for over 99% of the Group’s total GHG emissions).

## **C6.4**

### **(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

## **C6.4a**

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

### **Source**

6 out of 106 plants

### **Relevance of Scope 1 emissions from this source**

Emissions are not relevant

### **Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

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

Emissions are not relevant

### **Explain why this source is excluded**

Data was not considered material, and was thus not reported, for plants representing collectively less than 1% of 2018 industrial turnover. These 6 plants are in start-up or closing phase, with low or null impact on overall energy consumption and GHG emissions. However, FCA also provides full emission data for 4 active plants of companies that are not consolidated, including one joint venture in Turkey and three in China, and thus not counted in the total 102 number of plants reported in the Annual Report.

### **Source**

GHG other than CO2

### **Relevance of Scope 1 emissions from this source**

Emissions are not relevant

### **Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

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

Emissions are not relevant

### **Explain why this source is excluded**

Emissions of greenhouse gases (GHGs) other than CO2 have a negligible impact and therefore are not included (CO2 accounts for over 99% of the Group’s total GHG emissions).

## **C6.5**

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

### **Purchased goods and services**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

25496427

### **Emissions calculation methodology**

For this category the Group applied the spend-based method: Σ (value of purchased goods or services (€) × emission factor of purchased goods or services per unit of economic value (kg CO2/€)), see Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Technical Guidance for Calculating Scope 3 Emissions. Emission factors of purchased goods or services per unit of economic value were estimated using data of suppliers who responded to the CDP Supply Chain program. In 2018, 185 suppliers (representing about 55% of FCA's 2018 direct and indirect material purchased value) responded to the CDP program. Using the CDP Supply Chain data for the reporting year 2017, as well as our related annual purchased value, we calculated the emissions figure in metric tonnes of CO2 per unit of spend. We then estimated 2018 allocated emissions per supplier using our 2018 annual purchased value, and assumed that the emissions figures are the same. Data will be updated through the 2019 CDP Supply Chain program submitted by suppliers invited. Please note that following an analysis performed by FCA to validate the data collected through the CDP Supply Chain module, the emission allocation of 98 suppliers (representing approximately 42% of FCA’s 2018 direct and indirect material purchased value) were considered in the calculation. The figures have been scaled up to be representative of 100% of direct and indirect material purchased value.

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

42

### **Explanation**

### **Capital goods**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

1854098

### **Emissions calculation methodology**

For this category the Group applied the spend-based method: Σ (value of capital goods (€) × emission factor of capital goods per unit of economic value (kg CO2/€)), see Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Technical Guidance for Calculating Scope 3 Emissions. Emission factors of capital goods per unit of economic value were estimated using data of suppliers who responded to the CDP Supply Chain program. In 2018, 185 suppliers (representing about 55% of FCA's 2018 direct and indirect material purchased value) responded to the CDP program. Using the CDP Supply Chain data for the reporting year 2017, as well as our related annual purchased value, we calculated the emissions figure in metric tonnes of CO2 per unit of spend. We then estimated 2018 allocated emissions per supplier using our 2018 annual purchased value, and assumed that the emissions figures are the same. Data will be updated through the 2019 CDP Supply Chain program submitted by suppliers invited. Please note that following an analysis performed by FCA to validate the data collected through the CDP Supply Chain module, the emission allocation of 98 suppliers (representing approximately 42% of FCA’s 2018 direct and indirect material purchased value) were considered in the calculation. The figures have been scaled up to be representative of 100% of direct and indirect material purchased value.

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

42

### **Explanation**

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

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

53798

### **Emissions calculation methodology**

The activities considered for this category are: A) Upstream emissions of purchased fuels; B) Transmission and Distribution losses (according to the activities description listed in the GHG Protocol, Technical Guidance for Calculating Scope 3 emissions). CO2e emissions = CO2e emissions of A + CO2e emissions of B. For activity A the average-data method has been applied (see GHG Protocol, Technical Guidance for Calculating Scope 3 emissions): Upstream CO2 emissions of purchased fuels = Σ (fuel consumed (e.g., kWh) × upstream fuel emission factor (kg CO2e)/kWh)) where: upstream fuel emission factor = life cycle emission factor – combustion emission factor. For activity B the average-data method has been applied (see GHG Protocol, Technical Guidance for Calculating Scope 3 emissions): CO2e emissions from energy = Σ (electricity consumed on the grid (kWh) × Transmission and Distribution loss rate (%) × electricity emission factor ((kg CO2e)/kWh) from IEA (International Energy Agency). Data refers to about 50 premises. Transmission and Distribution loss rates are specific for each country where the plants are located, national official sources such as the resolutions of the Italian Regulatory Authority for Electricity and Gas – AAEG – have been used. Other data sources are internal. For calculating this Scope 3 category a location-based scope 2 total has been used as the basis.

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

### **Explanation**

The Group considers this category not relevant because it does not contribute significantly to the Company’s total anticipated Scope 3 emissions (this category weights less than 1%) as well as because few potential emissions reductions could be undertaken or influenced by the Company.

### **Upstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

909560

### **Emissions calculation methodology**

Data refers to 2018 CO2 emissions relating to both UPSTREAM logistics processes and SPARE PARTS distribution. The calculation of CO2 emissions is based on the criteria illustrated in the Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Technical Guidance for Calculating Scope 3 Emissions. Real activity data related to routes, distances, frequencies and transport capacities are used in the calculation process. Although the procedure to calculate CO2 emissions follows a similar approach for each mode of transportation, different coefficients or emission factors were used for each specific modality. Routes, number of transports and capacity utilization are extracted from Supply Chain Management Tools. Fuel efficiency is established in the base rate for truck carriers (included in payment terms), collected directly from carriers and shippers or refers to industry or international standards or local legislation and guidelines. Emission factors are taken from international standards or governmental agency guidelines, among which: standard EN16258, U.S. Environmental Protection Agency and DEFRA - U.K. Department for Environment, Food and Rural Affairs.

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

### **Explanation**

### **Waste generated in operations**

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

1500

### **Emissions calculation methodology**

For this category the Group uses the waste-type-specific method (see the GHG Protocol, Technical Guidance for Calculating Scope 3 emissions); emission factors are sourced for specific waste treatment methods. The methodology has been applied to sludge from paint processes sent to waste-to-energy plants. The estimated CO2 emissions for this type of waste in 2018 can be considered negligible compared to other Scope 3 categories (this category weights less than 1%).

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

### **Explanation**

### **Business travel**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

35659

### **Emissions calculation methodology**

The CO2 emissions recorded in 2018 are calculated and provided by the Group’s travel providers. For each paid trip, emissions are calculated automatically based on activity data on distance, destination, city pairs, seat class and distance class.

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

100

### **Explanation**

### **Employee commuting**

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

9000

### **Emissions calculation methodology**

The calculation is based on real data collected in past years from 7% of employees worldwide. According to GHG Protocol – Technical Guidance for Calculating Scope 3 Emissions - data gathered on distances covered and means of transport was then multiplied for emission factors taken from international standards or governmental agencies' guidelines.

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

### **Explanation**

The Group considers this category not relevant because it does not contribute significantly to the Company’s total anticipated Scope 3 emissions as well as because few potential emissions reductions could be undertaken or influenced by the Company.

### **Upstream leased assets**

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

This category is accounted as 0 (zero) because upstream leased assets are already incorporated in our Scope 1 and Scope 2 emissions since we have operational control over these sites. Total CO2 emissions were measured by multiplying the electricity emission factor specific for countries or fuel emission factor for the quantity of fuel/electricity consumed. Emission factors were taken from the International Energy Agency publication.

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

### **Explanation**

### **Downstream transportation and distribution**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

678238

### **Emissions calculation methodology**

Data refers to 2018 CO2 emissions relating to DOWNSTREAM logistics processes worldwide. The calculation of CO2 emissions is based on the criteria illustrated in the Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and Technical Guidance for Calculating Scope 3 Emissions. Real activity data related to routes, distances, frequencies and transport capacities are used in the calculation process. Although the procedure to calculate CO2 emission follows a similar approach for each mode of transportation, different coefficients or emission factors were used for each specific modality. Routes, number of transports and capacity utilization are extracted from Supply Chain Management Tools. Fuel efficiency is established in the base rate for truck carriers (included in payment terms), collected directly from carriers and shippers or refers to industry or international standards or local legislation and guidelines. Emission factors are taken from international standards or governmental agency guidelines, among which: standard EN16258, U.S. Environmental Protection Agency and DEFRA - U.K. Department for Environment, Food and Rural Affairs.

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

### **Explanation**

### **Processing of sold products**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Explanation**

A negligible portion of the mass-market vehicle portfolio undergoes further processing before being sold to customers, as well as chassis sold to other manufacturers. This category of the Group's overall Scope 3 emissions can be considered of minor relevance for its environmental footprint.

### **Use of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

85899110

### **Emissions calculation methodology**

Data is based on 3,471,312 vehicles sold in EU+EFTA, the US, Brazil and China markets. This figure includes passenger cars sold in EU+EFTA, Brazil and China and passenger cars and light duty trucks sold in model year 2018 in the US. Estimated average annual mileage of approximately 15,000 km for all fuel and engine types and 10 years of vehicle life. This Category includes vehicles leased to customers.

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

### **Explanation**

### **End of life treatment of sold products**

### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO2e**

931000

### **Emissions calculation methodology**

Data is estimated using Life Cycle Assessment according to ISO 14040-14044; performed with Gabi 9.0 software, using CML 2001 method (updated January 2016) in order to calculate the GWP of the end of life of an average FCA vehicle. This result was multiplied for the number of vehicles sold worldwide during 2018. The results take into account the environmental debits due to the following ELV management activities: depollution (oil, fluids), dismantling for component reuse and material recycling, shredding activities, landfilling of the Automotive Shredder Residue. The environmental credits due to the reuse, recycling and recovery of the materials sorted are out of the boundaries of the LCA. Data quality is good: majority of data is primary data and comes from internal FCA activities and from FCA partners involved in the end of life management activities in Europe (where the 2000/53 European Directive gives responsibilities to the Economic Operators of the chain), some high quality data comes from LCA software GABI 9.0 database; data on the vehicles sold worldwide refer to 2018. Data sources used are FCA internal ELV management activities; European ELV management chain partners; Gabi 9.0 SW database ; https://www.fcagroup.com/en-US/investors/financial\_regulatory/financial\_reports/files/FCA\_NV\_2018\_Annual\_Report.pdf

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

### **Explanation**

According to auto industry studies and FCA's internal calculations, the carbon footprint in terms of Global Warming Potential – GWP – (CO2eq) of the end-of-life treatment of sold products accounts for 1-3% of products' environmental impact throughout their entire life cycle (manufacturing process, use and disposal phases). Nevertheless the Group continues to analyze existing leading methodologies and initiatives and monitors developments in Europe of a common voluntary methodology in order to facilitate the future establishment of a range of possible policy scenarios related to these issues. The Group recognizes that in order to reach the targets set in 2015 by the European Directive 2000/53/EC (85% recycling and 95% recovery) it is essential to strengthen its commitment and intensify dedicated activities and programs. To maximize the recoverability of its end-of-life vehicles, the Group has developed a network of approved agents who are trained and instructed in dismantling reusable components and properly separating materials so that they can be recycled. In addition, the Group developed a website designed to provide customers with information and facilitate communication between dismantling agents and non-metallic materials recycling companies (www.carecycling.fiat.com). This website is continually updated and includes news and announcements about new relevant regulations, activities to promote recycling and new research projects for handling materials coming from the vehicle dismantling businesses.

### **Downstream leased assets**

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

0

### **Emissions calculation methodology**

This category is accounted as 0 (zero) as the Group incorporates emissions from products leased to customers into the category "use of sold products" in order to avoid double-counting between the two categories. In fact the same product is provided to customers both through sales or lease contracts and it's not considered relevant to separate them in terms of efforts aimed at developing strategies for emissions reduction. The accounting of CO2 emissions for products leased to customers is the same as for products sold to customers.

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

### **Explanation**

### **Franchises**

### **Evaluation status**

Not relevant, calculated

### **Metric tonnes CO2e**

125535

### **Emissions calculation methodology**

Figures refer to the distribution network in the EMEA region. Data estimated according to the GHG Protocol – Technical Guidance for Calculating Scope 3 Emissions. Through data collected in past years in selected dealerships, relying on directly monitored information about Scope 1 and Scope 2 energy consumption, we were able to calculate the energy consumption factor per square meter specific for car dealerships. Total CO2 emissions estimated by multiplying the energy consumption factor for the average surface dimension of dealerships, the number of points of sale in each EMEA market and applying emission factors specific for countries or fuels. Emission factors were taken from international standards such those released by the IEA.

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

### **Explanation**

The Group considers as not relevant the Scope 3 emissions from the privately owned dealership network as we do not have direct control or influence on these activities and the related emissions. However, several initiatives are in place to increase sustainability awareness and efficient use of resources in the network of independent dealers.

### **Investments**

### **Evaluation status**

Not relevant, explanation provided

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Explanation**

CO2 emissions from 4 Group plants operated through joint ventures on which the Group has operational control are already included in our Scope 1 and 2 figures. Emissions from other investments not included in Scope 1 and/or 2 are considered not relevant for the Group global carbon footprint as they are primarily relevant for financial sector companies. Even if the Group operates in a financial business providing financing and leasing packages as well as insurance services (i.e., credit protection insurance, car insurance, extended warranties), any possible emissions from these activities is negligible, and is estimated to represent less than 1% of total Scope 3 emissions.

### **Other (upstream)**

### **Evaluation status**

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Explanation**

### **Other (downstream)**

### **Evaluation status**

### **Metric tonnes CO2e**

<Not Applicable>

### **Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

### **Explanation**

## **C6.7**

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

No

## **C6.10**

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

### **Intensity figure**

0.0000326

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

3599405

### **Metric denominator**

unit total revenue

### **Metric denominator: Unit total**

110412000000

### **Scope 2 figure used**

Market-based

### **% change from previous year**

5.2

### **Direction of change**

Decreased

### **Reason for change**

In 2018, FCA revenues were in line with 2017, with a decrease of just 0.5% (from approximately €110.9 billion in 2017 to €110.4 billion in 2018). Total GHG emissions decreased by 5.7% (from around 3.8 to 3.6 million tons of CO2) thanks to an additional impact of emission reduction activities (around 3,500 projects) identified to reduce energy consumption and GHG emissions (145,000 tons of CO2 estimated savings) and to the discontinuity of activities with higher average intensity emissions.

## **C7. Emissions breakdowns**

## **C7.1**

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

No

## **C7.2**

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

|  |  |
| --- | --- |
| **Country/Region** | **Scope 1 emissions (metric tons CO2e)** |
| Argentina | 5456 |
| Brazil | 100308 |
| Canada | 155814 |
| China | 8867 |
| France | 535 |
| India | 6491 |
| Italy | 116947 |
| Mexico | 113027 |
| Poland | 13341 |
| Portugal | 2202 |
| Romania | 360 |
| Serbia | 11131 |
| Spain | 249 |
| Turkey | 38082 |
| United States of America | 556460 |

## **C7.3**

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

By business division

## **C7.3a**

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

|  |  |
| --- | --- |
| **Business division** | **Scope 1 emissions (metric ton CO2e)** |
| Mass-market vehicles assembly and stamping | 820675 |
| Mass-market vehicles engines and transmissions | 73907 |
| Mass-market vehicle casting | 42203 |
| Mass-market vehicle others | 18136 |
| Maserati | 15839 |
| Teksid | 144784 |
| Comau | 6172 |
| Plastic Components | 7551 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gross Scope 1 emissions, metric tons CO2e** | **Net Scope 1 emissions , metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Electric utility generation activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 970760 | <Not Applicable> | Scope 1 emissions related to mass-market vehicles activities in the four regions (APAC, EMEA, LATAM and North America) and to Maserati vehicles. |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C7.5**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Country/Region** | **Scope 2, location-based (metric tons CO2e)** | **Scope 2, market-based (metric tons CO2e)** | **Purchased and consumed electricity, heat, steam or cooling (MWh)** | **Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)** |
| Argentina | 7919 | 7919 | 20612 | 0 |
| Brazil | 96729 | 441 | 618470 | 615652 |
| Canada | 58619 | 15844 | 386161 | 0 |
| China | 69957 | 71614 | 110674 | 0 |
| France | 194 | 0 | 3583 | 3583 |
| India | 29078 | 9920 | 37700 | 25151 |
| Italy | 683764 | 559426 | 2146824 | 123079 |
| Mexico | 267544 | 262050 | 582125 | 9272 |
| Poland | 248203 | 221314 | 401363 | 17569 |
| Portugal | 21144 | 10971 | 63134 | 24761 |
| Romania | 469 | 266 | 1417 | 83 |
| Serbia | 33013 | 30975 | 49420 | 0 |
| Spain | 458 | 324 | 1564 | 250 |
| Turkey | 60666 | 60837 | 142409 | 0 |
| United States of America | 1218238 | 1218238 | 2138031 | 0 |

## **C7.6**

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

By business division

## **C7.6a**

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

|  |  |  |
| --- | --- | --- |
| **Business division** | **Scope 2, location-based emissions (metric tons CO2e)** | **Scope 2, market-based emissions (metric tons CO2e)** |
| Mass-market vehicle assembly and stamping | 1580827 | 1406267 |
| Mass-market vehicle engines and transmissions | 717996 | 686584 |
| Mass-market vehicle casting | 77495 | 75150 |
| Mass-market vehicle others | 73107 | 65358 |
| Maserati | 55333 | 51294 |
| Teksid | 238733 | 147285 |
| Comau | 10994 | 8489 |
| Plastic Components | 41509 | 29711 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scope 2, location-based, metric tons CO2e** | **Scope 2, market-based (if applicable), metric tons CO2e** | **Comment** |
| Cement production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Chemicals production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Coal production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Metals and mining production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (upstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Oil and gas production activities (downstream) | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Steel production activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Transport OEM activities | 2504758 | 2284653 | Scope 2 emissions related to mass-market vehicles activities in the four regions (APAC, EMEA, LATAM and North America) and to Maserati vehicles. |
| Transport services activities | <Not Applicable> | <Not Applicable> | <Not Applicable> |

## **C-TO7.8**

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

### **Activity**

Light Duty Vehicles (LDV)

### **Emissions intensity figure**

0.000103

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

85899110

### **Metric denominator**

p.km

### **Metric denominator: Unit total**

833114880000

### **% change from previous year**

-0.8

### **Vehicle unit sales in reporting year**

3471312

### **Vehicle lifetime in years**

10

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

15000

### **Load factor**

The calculation of emissions intensity figure is based on average occupancy rates for passengers cars used in MoMo ( Mobility Model), 2017 :equal to 1.6. This load factor value could change in the coming years depending on several factors such as mobility trends and future services offered (e.g., TaaS, Transport as a Service ) https://sciencebasedtargets.org/wp-content/uploads/2018/05/SBT-transport-guidance-Final.pdf.

### **Please explain the changes, and relevant standards/methodologies used**

The emissions intensity figure decreased by approx 1% in 2018 compared to the previous year and was mainly due to a reduction in global shipments combined with a Scope 3 reduction of 4.7%. Data is based on vehicles sold in EU+EFTA, the U.S., Brazil and China markets, which is the same perimeter as last year. This figure includes passenger cars sold in EU+EFTA, Brazil and China and passenger cars and light duty trucks sold in model year 2018 in the U.S.

## **C7.9**

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

Increased

## **C7.9a**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Change in emissions (metric tons CO2e)** | **Direction of change** | **Emissions value (percentage)** | **Please explain calculation** |
| Change in renewable energy consumption | 52600 | Increased | 1.5 | In 2018, the investment in renewable energy procurement slightly decreased compared with the previous year. For this reason CO2 emissions avoided in 2018 through the use of renewable energy are lower compared to previous year. Our total Scope 1 and Scope 2 emissions in the previous year was 3,513,485 tons of CO2. We calculated +1.5% through (52,600 / 3,513,485) \* 100 = +1.5% |
| Other emissions reduction activities | 143500 | Decreased | 4.1 | The World Class Manufacturing (WCM) system reflects FCA’s commitment to environmental and sustainability issues. WCM, and in particular the Environment pillar, is an integral part of the Group’s Environmental Management System. This pillar is dedicated to the development of instruments and methods that provide support in reaching targets to reduce the environmental impact of plants while aiming to cut waste and optimize energy use. The Energy sub-pillar, included under the Environment pillar, plays a key role in improving energy performance through specific projects targeted at eliminating inefficient energy use. Various energy efficiency initiatives were implemented throughout the Group to reduce energy consumption and thus GHG emissions. In 2018, around 3,500 specific energy projects were implemented, resulting in an estimated 143,500 fewer tons of CO2 emissions. Each project is tracked and energy efficiency improvements are part of internal program reporting (subject to WCM audit). Our total Scope1 and Scope 2 emissions in the previous year was 3,513,485 tons of CO2. We calculated -4.1% through (-143,500 / 3,513,485) \* 100 = -4.1% |
| Divestment |  | <Not Applicable> |  |  |
| Acquisitions |  | <Not Applicable> |  |  |
| Mergers |  | <Not Applicable> |  |  |
| Change in output | 173000 | Increased | 4.9 | Increase in production volumes (output) for some Group companies, mainly in the Automotive sector, resulted in a corresponding increase in energy consumption and thus in GHG emissions. Our total Scope1 and Scope 2 emissions in the previous year was 3,513,485 tons of CO2. We calculated +4.9% through (+173,000 / 3,513,485) \* 100 = +4.9% |
| Change in methodology |  | <Not Applicable> |  |  |
| Change in boundary | 4000 | Increased | 0.1 | 0.1% increase in boundary is mainly due to a Mass-market vehicle others increase of plant. Our total Scope1 and Scope 2 emissions in the previous year was 3,513,485 tons of CO2. We calculated +0.1% through (4,000 / 3,513,485) \* 100 = +0.1% |
| Change in physical operating conditions |  | <Not Applicable> |  |  |
| Unidentified |  | <Not Applicable> |  |  |
| Other |  | <Not Applicable> |  |  |

## **C7.9b**

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

Market-based

## **C8. Energy**

## **C8.1**

### **(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

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

## **C8.2**

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

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

## **C8.2a**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Heating value** | **MWh from renewable sources** | **MWh from non-renewable sources** | **Total MWh** |
| Consumption of fuel (excluding feedstock) | LHV (lower heating value) | 0 | 5891787 | 5891787 |
| Consumption of purchased or acquired electricity | <Not Applicable> | 808066 | 4524702 | 5332768 |
| Consumption of purchased or acquired heat | <Not Applicable> | <Not Applicable> | <Not Applicable> | <Not Applicable> |
| Consumption of purchased or acquired steam | <Not Applicable> | 0 | 1027284 | 1027284 |
| Consumption of purchased or acquired cooling | <Not Applicable> | 11019 | 332368 | 343387 |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable> | 714 | <Not Applicable> | 714 |
| Total energy consumption | <Not Applicable> | 819799 | 11776141 | 12595941 |

## **C8.2b**

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

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

## **C8.2c**

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

### **Fuels (excluding feedstocks)**

Natural Gas

### **Heating value**

LHV (lower heating value)

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

5611513

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

<Not Applicable>

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

0

### **MWh fuel consumed for self-generation of steam**

5599510

### **MWh fuel consumed for self-generation of cooling**

<Not Applicable>

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

12003

### **Comment**

### **Fuels (excluding feedstocks)**

Diesel

### **Heating value**

LHV (lower heating value)

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

19369

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

<Not Applicable>

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

0

### **MWh fuel consumed for self-generation of steam**

19369

### **MWh fuel consumed for self-generation of cooling**

<Not Applicable>

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

0

### **Comment**

### **Fuels (excluding feedstocks)**

Coal

### **Heating value**

LHV (lower heating value)

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

226629

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

<Not Applicable>

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

0

### **MWh fuel consumed for self-generation of steam**

226629

### **MWh fuel consumed for self-generation of cooling**

<Not Applicable>

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

0

### **Comment**

### **Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

### **Heating value**

LHV (lower heating value)

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

34275

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

<Not Applicable>

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

0

### **MWh fuel consumed for self-generation of steam**

34275

### **MWh fuel consumed for self-generation of cooling**

<Not Applicable>

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

0

### **Comment**

## **C8.2d**

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

### **Coal**

### **Emission factor**

0.0946

### **Unit**

metric tons CO2 per GJ

### **Emission factor source**

2006 IPCC Guidelines

### **Comment**

### **Diesel**

### **Emission factor**

0.0741

### **Unit**

metric tons CO2 per GJ

### **Emission factor source**

2006 IPCC Guidelines

### **Comment**

### **Liquefied Petroleum Gas (LPG)**

### **Emission factor**

0.0631

### **Unit**

metric tons CO2 per GJ

### **Emission factor source**

2006 IPCC Guidelines

### **Comment**

### **Natural Gas**

### **Emission factor**

0.0561

### **Unit**

metric tons CO2 per GJ

### **Emission factor source**

2006 IPCC Guidelines

### **Comment**

## **C8.2e**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total Gross generation (MWh)** | **Generation that is consumed by the organization (MWh)** | **Gross generation from renewable sources (MWh)** | **Generation from renewable sources that is consumed by the organization (MWh)** |
| Electricity | 8602 | 8392 | 215 | 215 |
| Heat | 0 | 0 | 0 | 0 |
| Steam | 227754 | 227754 | 0.8 | 0.8 |
| Cooling | 0 | 0 | 0 | 0 |

## **C8.2f**

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

### **Basis for applying a low-carbon emission factor**

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

### **Low-carbon technology type**

Solar PV

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

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

2523

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

0

### **Comment**

Main part of MWh relates to energy accounted for at a low-carbon emission factor in Italy.

### **Basis for applying a low-carbon emission factor**

Contract with suppliers or utilities ( e.g. green tariff), supported by energy attribute certificates

### **Low-carbon technology type**

Solar PV

Wind

Hydropower

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

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

100720

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

0

### **Comment**

Main part (around 80%) of MWh relates to hydropower supply in Italy. Remaing part is related to PV and wind energy in China.

### **Basis for applying a low-carbon emission factor**

Contract with suppliers or utilities (e.g. green tariff), not supported by energy attribute certificates

### **Low-carbon technology type**

Solar PV

Wind

Hydropower

Biomass (including biogas)

Other low-carbon technology, please specify (Geothermal)

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Latin America

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

670674

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

0

### **Comment**

Main part of MWh relates to hydropower supply in Brazil.

### **Basis for applying a low-carbon emission factor**

Energy attribute certificates, Guarantees of Origin

### **Low-carbon technology type**

Hydropower

### **Region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

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

45484

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

0

### **Comment**

All MWh relates to hydropower supply in Italy.

## **C-TO8.4**

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

### **Activity**

Light Duty Vehicles (LDV)

### **Metric figure**

24.75

### **Metric numerator**

tCO2

### **Metric denominator**

Production: Vehicle

### **Metric numerator: Unit total**

85899110

### **Metric denominator: Unit total**

3471312

### **% change from previous year**

-1.42

### **Please explain**

The intensity factor decreased by 1.42% in 2018 compared to the previous year and was mainly due to a reduction in global shipments combined with a Scope 3 reduction of 4.7%. Data is based on 3,471,312 vehicles sold in EU+EFTA, the U.S., Brazil and China markets, which is the same perimeter as last year. This figure includes passenger cars sold in EU+EFTA, Brazil and China and passenger cars and light duty trucks sold in model year 2018 in the US.

## **C9. Additional metrics**

## **C9.1**

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

### **Description**

Waste

### **Metric value**

875170

### **Metric numerator**

### **Metric denominator (intensity metric only)**

### **% change from previous year**

4

### **Direction of change**

Decreased

### **Please explain**

Tons of total waste generated by FCA plants worldwide. This figure decreased by 4% in 2018 vs previous year and decreased by 46% compared with 2010.

### **Description**

Waste

### **Metric value**

24099

### **Metric numerator**

### **Metric denominator (intensity metric only)**

### **% change from previous year**

6

### **Direction of change**

Decreased

### **Please explain**

Tons of total hazardous waste generated by FCA plants worldwide. This figure decreased by 6% in 2018 vs previous year and decreased by 51% compared with 2010.

### **Description**

Waste

### **Metric value**

238854

### **Metric numerator**

### **Metric denominator (intensity metric only)**

### **% change from previous year**

4

### **Direction of change**

Increased

### **Please explain**

Tons of total waste to landfill generated by FCA plants worldwide. This figure increased by 4% in 2018 vs previous year but decreased by 53% compared with 2010. The quantity of waste sent to landfills by the Group is significantly influenced by a single type of waste from an FCA company that operates in the iron and casting components sector; Teksid generates inert industrial process sand, which must be sent to landfill at the present time due to technological constraints. Teksid has several projects in progress aimed at optimizing the management of this type of waste.

## **C-TO9.3/C-TS9.3**

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

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Fleet adoption

### **Technology**

Plug-in hybrid vehicle (PHEV)

### **Metric figure**

62000

### **Metric unit**

Units

### **Explanation**

We are collaborating with Waymo, Google’s self-driving technology company, to integrate its self-driving technology into the Chrysler Pacifica Hybrid. Production of the first 100 Chrysler Pacifica Hybrid minivans built to enable fully self-driving operations was completed in late 2016, with nearly 600 minivans joining Waymo’s self-driving test fleet to date. In 2018, we announced that we would expand our partnership with an agreement to add up to 62,000 Chrysler Pacifica Hybrid minivans to Waymo’s self-driving fleet.

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Battery electric vehicle (BEV)

### **Metric figure**

25000

### **Metric unit**

Units

### **Explanation**

The Fiat 500e is FCA’s full electric vehicle offering and is available only in the North American market. It has an all-electric range of 84 miles and achieves 121 MPGe City, 103 MPGe Highway and 112 MPGe Combined. Since its introduction in the 2013 model year (production began in 2012) approximately 25,000 units have been sold. FCA does not publicly disclose sales of the Fiat 500e for each reporting year, and to account for this, average sales across the six reporting years is 4,167.

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Vehicle using bio-fuel

### **Metric figure**

374000

### **Metric unit**

Units

### **Explanation**

In Brazil, FCA has a full range of Flexfuel vehicles that run on varying blends of gasoline and bioethanol. Brazil has an extensive bioethanol distribution network, supported by long-standing government policies and readily available raw materials. In Brazil, the major market in the LATAM region, more than 374,000 Flexfuel vehicles were registered in 2018, accounting for approximately 86% of vehicles licensed by the Group in this market. FCA participates in the government’s vehicle fuel consumption monitoring program (PBEV - Brazilian Labeling Program Vehicle).

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Sales

### **Technology**

Vehicle using LPG/CNG

### **Metric figure**

20000

### **Metric unit**

Units

*units refers only to CNG propulsion*

### **Explanation**

FCA was a pioneer and has been among the leaders for more than 20 years in natural gas vehicles in Europe. Since 1997, the Group has sold more than 760,000 natural gas-powered cars and commercial vehicles. Natural gas is one of the most economical fuels available and a viable alternative to traditional fuels. It produces a low level of regulated emissions and generates 23% less CO2 emissions compared with gasoline. In addition, natural gas has the potential to become a renewable fuel source in the form of biomethane. Biomethane, which is produced by upgrading biogas, has the same properties and uses as fossil natural gas. Biogas is derived from organic materials such as manure, crop residues and organic municipal waste. A natural gas vehicle can also run on biomethane and, on a well-to-wheel basis, produces roughly the same level of CO2 emissions as an electric-powered vehicle running on electricity generated from renewable fuel. FCA is engaged in several projects to promote biomethane as a sustainable solution for transportation. Among these initiatives, a Fiat Panda Natural Power vehicle was delivered in 2017 to the CAP Group, the utility company that manages water works, sewage and treatment facilities in metropolitan Milan (Italy). Since then, the Fiat Panda Natural Power has recorded thousands of kilometers fueled by the biomethane made by the CAP Group from sewage sludge and waste water. In 2018, the project was included within the “Zerosprechi” campaign and presented to the Italian Parliament as a circular economy best practice. Please note that the 20,000 vehicles declared only refer to CNG propulsion.

### **Activity**

Light Duty Vehicles (LDV)

### **Metric**

Production

### **Technology**

Fuel cell electric vehicle (FCEV)

### **Metric figure**

0

### **Metric unit**

Units

### **Explanation**

FCA’s approach to responsible vehicle development includes dedication to efficient powertrains, improved aerodynamics, weight reduction, vehicle safety, quality, increased use of renewable materials, and innovative mobility options such as autonomous technology and connectivity solutions. Economically viable results can best be achieved by combining, where technologically possible, conventional and alternative technologies. FCA continues to monitor the development of fuel cell technology.

## **C-TO9.6/C-TS9.6**

### **(C-TO9.6/C-TS9.6) What is your investment in research and development (R&D), equipment, products and services and which part of it would you consider a direct investment in the low-carbon transition?**

### **Activity**

Light Duty Vehicles (LDV)

### **Investment start date**

January 1 2018

### **Investment end date**

December 31 2018

### **Investment area**

R&D

### **Technology area**

Other, please specify (Autonomous Driving, Connectivity, EV)

### **Investment maturity**

Applied research and development

### **Investment figure**

3500000000

### **Low-carbon investment percentage**

81-100%

### **Please explain**

FCA’s global research and development activities are aimed at improving the design, performance, safety, fuel efficiency, reliability, consumer perception and sustainability of the Group’s products and services. In 2018, the Group invested approximately €3.5 billion in research and development, representing around 3.2% of net revenues from industrial operations. Approximately 18,000 employees at 46 locations worldwide were involved in the Group’s innovation activities, continuing to generate a significant intellectual property portfolio. At year-end 2018, FCA had 5,726 patents and patent applications, and 1,941 protected product designs. Patent applications are filed in Europe, the U.S. and around the world to protect technology and improvements considered important to our business. Important areas of focus for the Group’s research and development activities and business plan include: • continuing to collaborate and partner with technology and auto industry leaders - these initiatives provide the opportunity to leverage each other’s capabilities and achieve the synergies and economies of scale needed to advance the development of autonomous driving technologies • continuing to invest in a suite of technical solutions to keep pace with evolving regulatory requirements in each region while, at the same time, enhancing the specific strengths of our brands • expecting to offer more than 30 vehicle nameplates that are expected to utilize one or more of the EV systems, as announced during the June 1, 2018 Capital Markets Day. The primary Research and Development facilities at FCA are located in Turin and Modena (Italy), Auburn Hills (U.S.) and Windsor (Canada). In 2018, a new facility was dedicated at FCA’s Chelsea Proving Grounds (U.S.) to further develop and test autonomous vehicle and advanced safety technologies. The facility was built for testing various levels of autonomy and enables the Company to evaluate FCA vehicles using test protocols from third parties, such as the Insurance Institute for Highway Safety (IIHS), U.S. New Car Assessment Program (NCAP) and European New Car Assessment Program (EuroNCAP), plus additional electronic brake test simulations.

### **Activity**

Light Duty Vehicles (LDV)

### **Investment start date**

July 1 2018

### **Investment end date**

June 30 2020

### **Investment area**

R&D

### **Technology area**

Other, please specify (Electrification, Autonomous Driving, )

### **Investment maturity**

Applied research and development

### **Investment figure**

420000000

### **Low-carbon investment percentage**

81-100%

### **Please explain**

In June 2018, Fiat Chrysler Automobiles N.V. signed with the European Investment Bank (“EIB”), a € 420 million four-year loan to support Research and Development projects to be implemented by FCA during 2018-2020. FCA investment in Research and Development for the period 2018-2020 has a number of key objectives including electrification technology solutions for hybrid and battery electric vehicles and the development of autonomous driving. Moreover, the Research and Development activities will be dedicated to the application of connectivity technologies for the offering of telematics services on the FCA product line up. The Research and Development projects also include the development of digital technologies to be deployed in manufacturing processes. Please note that the €420 million are a part of the expected €9 billion Research and Development investment plan declared during FCA Capital Markets Day related to the 2018-2022 electrification plan.

### **Activity**

Light Duty Vehicles (LDV)

### **Investment start date**

June 1 2018

### **Investment end date**

June 1 2022

### **Investment area**

R&D

### **Technology area**

Electrification

### **Investment maturity**

Applied research and development

### **Investment figure**

9000000000

### **Low-carbon investment percentage**

81-100%

### **Please explain**

During Capital Markets Day (June 2018), FCA announced an expected investment of more than €9 billion in electrification for the new 2018-2022 business plan. By 2022, FCA will implement several EV systems such as mHEV, HEV, PHEV and BEV across global vehicle architectures. The vehicle segments involved in the electrification strategy are small, compact/mid and large. In total, FCA intends to offer over 30 nameplates that are expected to utilize one or more of the EV systems by 2022.

## **C10. Verification**

## **C10.1**

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

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

## **C10.1a**

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

### **Scope**

Scope 1

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Complete

### **Type of verification or assurance**

Limited assurance

### **Attach the statement**

.

[FCA\_Assurance Report on CDP 2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/OSjwLX7z70im1Hqkvc_wHA/FCAAssuranceReportonCDP2019.pdf)

### **Page/ section reference**

Pages 1-3

### **Relevant standard**

ISAE 3410

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

100

### **Scope**

Scope 2 location-based

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Complete

### **Type of verification or assurance**

Limited assurance

### **Attach the statement**

.

[FCA\_Assurance Report on CDP 2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/OSjwLX7z70im1Hqkvc_wHA/FCAAssuranceReportonCDP2019.pdf)

### **Page/ section reference**

Pages 1-3

### **Relevant standard**

ISAE 3410

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

100

### **Scope**

Scope 2 market-based

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Complete

### **Type of verification or assurance**

Limited assurance

### **Attach the statement**

.

[FCA\_Assurance Report on CDP 2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/OSjwLX7z70im1Hqkvc_wHA/FCAAssuranceReportonCDP2019.pdf)

### **Page/ section reference**

Pages 1-3

### **Relevant standard**

ISAE 3410

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

100

## **C10.1b**

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

### **Scope**

Scope 3- at least one applicable category

### **Verification or assurance cycle in place**

Annual process

### **Status in the current reporting year**

Complete

### **Attach the statement**

.

[FCA\_Assurance Report on CDP 2019.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/OSjwLX7z70im1Hqkvc_wHA/FCAAssuranceReportonCDP2019.pdf)

### **Page/section reference**

Pages 1-2. Categories verified: Category 1 - Purchased goods and services; Category 2 - Capital goods; Category 4 - Upstream transportation and distribution; Category 8: Upstream leased assets; Category 9 - Downstream transportation and distribution; Category 11 - Use of sold products; Category 13: Downstream leased assets.

### **Relevant standard**

ISAE 3410

## **C10.2**

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

Yes

## **C10.2a**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Disclosure module verification relates to** | **Data verified** | **Verification standard** | **Please explain** |
| C4. Targets and performance | Year on year change in emissions (Scope 1 and 2) | ISAE3000 | Since several years FCA data related to targets has been verified. During yearly CO2 emission verification, the auditors assess both year emission and change to previous years. |
| C4. Targets and performance | Year on year emissions intensity figure | ISAE3000 | Since several years FCA data related to targets has been verified. During yearly CO2 emission verification, the auditors assess both year emission and change to previous years. |
| C4. Targets and performance | Progress against emissions reduction target | ISAE3000 | Since several years FCA data related to targets has been verified. During yearly CO2 emission verification, the auditors assess both year emission and change to previous years. |

## **C11. Carbon pricing**

## **C11.1**

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

Yes

## **C11.1a**

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

EU ETS

Ontario CaT

## **C11.1b**

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

### **EU ETS**

### **% of Scope 1 emissions covered by the ETS**

5

### **Period start date**

January 1 2018

### **Period end date**

December 31 2018

### **Allowances allocated**

46639

### **Allowances purchased**

10086

### **Verified emissions in metric tons CO2e**

52246

### **Details of ownership**

Facilities we own and operate

### **Comment**

### **Ontario CaT**

### **% of Scope 1 emissions covered by the ETS**

13

### **Period start date**

January 1 2018

### **Period end date**

December 31 2018

### **Allowances allocated**

156000

### **Allowances purchased**

0

### **Verified emissions in metric tons CO2e**

151826

### **Details of ownership**

Facilities we own and operate

### **Comment**

## **C11.1d**

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

in 2018, much of the energy used at FCA plants comes from third-party power generation plants, with around 45% produced by company power plants. At year-end 2018, the Group only had six directly owned power generation plants that qualified for a trading system. Five qualified for the European emissions trading system (EU-ETS), all of them located in Italy, and one located in Ontario qualified for the Ontario CaT. CO2 emissions allocated to these generation plants for 2018 have to date resulted in around 202,000 tons compared to the verified emissions of 204,000 tons. The Group purchased around 10,000 allowances. As FCA is under the two schemes and the EU-ETS 3rd phase (2013-2020) has already started, the Group strategy is structured on four main drivers with the aim of increasing efficiency in terms of energy consumed and CO2 emitted (reducing energy consumption and using cleanest fuels, as well as renewable sources) and reducing the financial cost of energy generation: A) Energy efficiency initiatives: the Group benefits from significant synergies among FCA companies through sharing of best practices, increased engagement and awareness among plant employees, and the implementation of around 3,500 energy improvement projects under the World Class Manufacturing program. In support of these activities, further training and awareness initiatives were delivered to personnel. B) Efficient energy generation: for the production of energy, FCA favors high efficiency power generation systems: cogeneration and trigeneration plants capable of providing heating and electricity for manufacturing and climate control needs. C) Renewable energy: the Group is committed to use, where possible and economically viable, renewable energy sources. Almost all the electricity purchased in Brazil has been renewable for several years. D) Financial instruments: in order to minimize the financial impact of fluctuations in energy prices, several actions are available from a procurement perspective; Fuel markets allow a vast range of flexible procurement methodologies depending on the risk appetite (mainly represented by fixed-term vs indexed formulas). The impact on financials is also monitored providing a monthly forecast according to market price volatility and consumption needs expressed by manufacturing plants and their modifications while the energy contracts are in effect.

## **C11.2**

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

No

## **C11.3**

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

Yes

## **C11.3a**

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

### **Objective for implementing an internal carbon price**

Identify and seize low-carbon opportunities

### **GHG Scope**

Scope 2

### **Application**

Plants' electric energy

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

7

### **Variance of price(s) used**

FCA applies a differentiated pricing depending on the country or Region where we buy renewables.

### **Type of internal carbon price**

Implicit price

### **Impact & implication**

FCA calculates its implicit carbon price by dividing the cost of abatement / procurement by the tons of CO2. It is internally used to evaluate cost efficiency of emission reduction projects

## **C12. Engagement**

## **C12.1**

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

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

## **C12.1a**

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

### **Type of engagement**

Information collection (understanding supplier behavior)

### **Details of engagement**

Collect climate change and carbon information at least annually from suppliers

### **% of suppliers by number**

8

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

55

### **% Scope 3 emissions as reported in C6.5**

55

### **Rationale for the coverage of your engagement**

To promote awareness among suppliers of their impact on the climate, particularly regarding greenhouse gas emissions, 261 suppliers were invited to participate in the CDP supply chain program in 2018. Suppliers invited were selected among those with the highest spending and/or significant expected environmental impact.

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

Of those invited, 185 suppliers disclosed (71% response rate), attaining an average score of B- (on a scale from A to D-). This response rate was due in part to dedicated supplier training webinars that FCA provided in cooperation with the CDP supply chain program to support this engagement and to convey the importance and benefits from transparently reporting on impacts. Approximately 78% of responding suppliers reported scope 1 and scope 2 emissions. By 2020, the Group expects to monitor 90-100% of top Group suppliers’ CO2 emissions (accounting for about 57% of annual purchases by value) through the CDP supply chain program. In 2018, suppliers disclosing accounted for approximately 55% of FCA annual purchases by value from direct and indirect material suppliers. 2018 represented a significant improvement in the impact of engagement compared with the previous years. In 2017 and 2016, suppliers disclosing through the CDP supply chain program accounted respectively for approximately 50% and 37% of FCA annual purchases by value from direct and indirect material suppliers for those years.

### **Comment**

## **C12.1b**

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

### **Type of engagement**

Education/information sharing

### **Details of engagement**

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

### **% of customers by number**

29

### **% Scope 3 emissions as reported in C6.5**

22

### **Please explain the rationale for selecting this group of customers and scope of engagement**

FCA regularly engages with customers to provide information regarding the proper use of our products and services while accommodating brand values, local requirements and different customer needs. This information is provided through a variety of methods, which includes owner and vehicle maintenance manuals. For example, in Europe the manuals include recommendations on driving style, appropriate maintenance and other topics that can contribute to reducing fuel consumption and lowering the amount of harmful emissions released into the atmosphere. The environmental impacts of the suggestions provided in the manuals can change due to several factors and external parameters. For example, one suggestion is that electric devices should only be used for the amount of time needed, such as the heated rear window, windscreen wipers and heater fan, which require a considerable amount of energy. These devices can increase fuel consumption by up to +25% in an urban driving cycle.

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

Please note: engagement size refers to the owner manuals for vehicles sold in Europe. FCA customers can access the Mopar channel (https://www.mopar.com/en-us/care/owners-manual.html) and consult features and benefits available such as: 1) Manuals and Guides 2) Educational Videos 3) Uconnect® features. Included in Uconnect Live system is eco:Drive, an FCA software system available on selected models, which offers personalized tips on driving styles with the objective of contributing to a reduction in fuel consumption and emissions. The impact and measures of eco:Drive includes the CO2 avoided by the eco:Drive community, is updated on a daily basis and is available at the following website http://ecodrive.driveuconnect.eu/portal/it/Content.aspx. Every ton avoided by FCA customers can be considered a success. By the end of 2018, adopting ecotips provided in user manuals and the eco.Drive platform, approximately 200,000 FCA customers were able to avoid around 6 thousand tons of CO2.

## **C12.1c**

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

Central to FCA’s approach is the belief that effective, lasting solutions to climate change and other pressing environmental and social issues can only be achieved through an integrated approach that combines individual and collective commitment; an effective multi-stakeholder strategy; investment in enabling premium processes and technologies; and the incorporation of circular economy principles in operations. These elements are an integral part of FCA’s model of operating responsibly.

FCA is also committed to support the monitoring and progressive reduction of the environmental footprint attributable to the Dealer Network, despite the fact that it only has operational control over Company-owned dealerships and that the majority of the dealer network is privately-owned.

FCA is working on initiatives to reduce the environmental impact of the network based on local network opportunities. These programs relate to increasing awareness on sustainability topics while improving daily business operations. One example is the program (launched in 2017) to assist U.S. dealers in converting to LED lighting. FCA and our partners in the program offer an LED retrofit solution that not only provides a brighter and safer environment at night, but also decreased the dealers’ total electricity cost more than 40% by reducing consumption by more than 50%, based on pilot results. This program supports FCA’s commitment to reducing the overall environmental impact, in addition to offering a positive financial impact for dealerships and a better experience for customers.

## **C12.3**

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

Direct engagement with policy makers

Trade associations

Other

## **C12.3a**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Focus of legislation** | **Corporate position** | **Details of engagement** | **Proposed legislative solution** |
| Other, please specify (Alternative fuels and technologies) | Support | As a global enterprise with a complex, intricately connected value chain, FCA engages both directly or through sector associations with a wide range of stakeholders, including policy makers on a variety of issues. FCA’s approach to engaging public institutions aims to make a positive contribution to business conditions that are competitive, as well as sustainable over the long term. For instance, in Europe the Group belongs to trade associations such as the European Automobile Manufacturers’ Association (ACEA). The Association’s mission is to define common interests, policies and positions in the framework of a dialogue with European institutions and other stakeholders. Through ACEA, which interfaces on a regular basis with the major European institutions, FCA has promoted a constructive dialogue with institutions in the following priority fields: connected and automated driving; competitiveness; international trade; market and economy; environment and sustainability; R&D; safety; and transport policy. | On June 1 2018, FCA presented the Group’s 2018-2022 Business Plan to financial analysts and institutional investors, which aims to develop and offer a broad portfolio of electrified technologies over the next years, in line with the ambitious CO2 targets set by the EU. FCA intends to utilize one or more EV systems on over 30 nameplates by 2022, including PHEV and BEV models. Governments should provide a regulatory framework with policies, rules and procedures that are stable, clear and definable and support the transition to electrification with broad industrial policies, including the creation of an adequate infrastructure to fuel the vehicles (i.e. DAFI Directive implementation), as well as continue to help drive consumer demand. |

## **C12.3b**

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

Yes

## **C12.3c**

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

### **Trade association**

Natural Gas Vehicle Associations (NGV America, NGVA Europe, NGV Italy)

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

Consistent

### **Please explain the trade association’s position**

Natural Gas Vehicle Associations (NGVAmerica, NGVA Europe & NGV Italy) support the adoption of government policies that stimulate the development and use of natural gas vehicles (NGVs) to help achieve a number of national and international policy goals, including reducing urban air pollution and greenhouse gases. NGVAmerica advocates for U.S. federal and state legislation and policies that would provide incentives to retail consumers and fleets to purchase and operate NGVs, to original equipment manufacturers (OEMs) to produce NGVs, and to entities to install natural gas home refueling appliances and public refueling infrastructure; support the expansion of NGVs in public transportation and government fleets; and government funding for natural gas vehicle and infrastructure research, development and demonstration. The association also advocates for federal legislation that would provide regulatory incentives to OEMs to produce NGVs.

### **How have you influenced, or are you attempting to influence their position?**

FCA is represented on the Board of Directors of the NGVA Europe and NGV Italy associations, and as a member of NGVAmerica through FCA US. Natural gas is one of the most economical fuels available and a viable alternative to traditional fuels. It produces a low level of regulated emissions and generates 23% less CO2 emissions compared with gasoline. FCA is among the EU-market leaders in compressed natural gas (CNG) propulsion. Since 1997, the Group has sold approximately 760,000 natural gas-powered cars and commercial vehicles. The Group’s own transport fleet - FCA Transport in the U.S. and Canada, and i-FAST Automotive Logistics in Europe - includes nearly 200 trucks that run on compressed natural gas (CNG) or liquified natural gas (LNG) for the delivery of finished vehicles. FCA believes that advocating the use of natural gas in many different ways will help to secure sustainable mobility. FCA continues to support efforts of the associations to establish and advance industry positions on a range of issues to reduce market hurdles and promote the development of an NGV market. This includes support for the association’s efforts to advance government legislative and regulatory policies that would encourage and support the production, purchase and use of NGVs; incentivize the installation of natural gas fuel pumps at service stations and commercial facilities; support government funding for NGV and infrastructure research and development, and particularly for NGVAmerica, the installation of home refueling infrastructure.

### **Trade association**

EDTA (Electric Drive Transportation Association)

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

Consistent

### **Please explain the trade association’s position**

EDTA is a leading U.S. cross-industry trade association that works with its members to advance electric drive vehicles and technologies, including hybrid, pure battery electric, plug-in hybrid and fuel cell electric vehicles, through public policy advocacy and education. EDTA’s membership includes vehicle manufacturers, equipment manufacturers, energy companies, technology developers, component suppliers, government entities, fleet managers, and end users. The association advocates for U.S. federal and state legislation and policies that would maintain current tax incentives for purchasing electric vehicles and installing electric vehicle charging infrastructure; advance non-financial incentives and initiatives for electric vehicles; extend existing financial incentives for light-duty hybrid and electric vehicles to trucks; standardize regulatory policies and requirements for electric drive vehicles and infrastructure; and maintain U.S. federal support for research and development to accelerate technology breakthroughs for electric drive and other advanced vehicles. EDTA also educates media, policymakers and the public regarding the environmental benefits of electric vehicles.

### **How have you influenced, or are you attempting to influence their position?**

FCA is represented through FCA US as a member of the Association. FCA US, with its expertise in hybrid and electric technologies, is the vehicle electrification center for the entire FCA Group. The challenge is to deliver cost-effective, high-value solutions while ensuring the improvement and evolution of internal combustion engines in this rapidly developing technical area. Accordingly, FCA is developing technologies that can be used in a range of electrified vehicles, including conventional hybrids, plug-in hybrids, fully electrified and range-extended electric vehicles. FCA’s first battery electric vehicle for mass production, the Fiat 500e, began production in late 2012. The Chrysler Pacifica Hybrid – the industry’s first electrified minivan - started production in late 2016 and the electric-powered Chrysler Portal Concept was revealed at the 2017 U.S. Consumer Electronics Show. In 2018, FCA launched three applications of mild hybrids using belt starter generator (BSG) technology, which offers improvements in fuel economy and a reduction in CO2 emissions. This new 48-volt mild hybrid technology is marketed as “eTorque” in the all-new 2018 Jeep Wrangler equipped with the 2.0-liter turbo engine and the all-new 2019 Ram 1500 3.6-liter and 5.7-liter applications. On June 1, 2018, FCA presented the 2018-2022 business plan. It disclosed that in the U.S., FCA expects to electrify 20% of its overall fleet, including commercial vehicles, in 2022 with a focus on plug-in hybrid electric vehicle systems; 15% are expected to be equipped with a mild hybrid system. FCA announced on June 1, 2018 its intention to offer electric vehicle systems on over 30 nameplates worldwide. FCA US supports efforts of the association to establish and advance industry positions on a range of issues to reduce market hurdles and promote the development of an electric vehicle market. This includes support for the association’s efforts to advance U.S. federal and state legislative and regulatory policies that would encourage and support the purchase and use of electric vehicles; the installation of public and home electric vehicle charging infrastructure; and U.S. government funding for electric vehicle and infrastructure research and development.

### **Trade association**

Alliance of Automobile Manufacturers

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

Consistent

### **Please explain the trade association’s position**

The Alliance of Automobile Manufacturers is the leading advocacy group for the U.S. auto industry. The Alliance focuses on developing and implementing constructive solutions to public policy challenges that promote sustainable mobility and benefit society in the areas of environment, energy and motor vehicle safety. The organization provides FCA US and the auto industry with a united voice on U.S. federal and state regulatory and legislative matters. The Alliance supports an economy-wide GHG emission reduction program, with supporting roles for state and local government. All sectors of the economy share responsibility for reducing GHGs and should be linked into one comprehensive program that allows businesses to trade off costs and benefits. It advocates a comprehensive multi-stakeholder approach to energy security and climate change progress. The Alliance supports a harmonized National Program to improve fuel economy and reduce tailpipe GHG emissions.

### **How have you influenced, or are you attempting to influence their position?**

FCA is represented through FCA US on the Board of Directors of the association. FCA US supports the development of a harmonized U.S. National Program for improving fuel economy and reducing GHG emissions and plays an active role in the association, for example, by participating in working groups, events and contributing to the preparation of technical supporting documents.

### **Trade association**

ACEA (European Automobile Manufacturers Association)

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

Consistent

### **Please explain the trade association’s position**

The European Automobile Manufacturers Association (ACEA) represents the interests of the 15 major Europe-based car, van, truck and bus makers in the EU. Using limited resources responsibly and protecting our environment: these are among the most important tasks facing society today. In both respects, European automobile manufacturers have an important role to play and they are embracing this challenge. Vehicle makers are technology leaders, driving innovation towards cleaner, "greener" transport. Climate change is a global challenge which demands collective action. The automotive sector is playing a leading role, embracing its responsibility to reduce CO2 emissions from vehicles and production. As a result of significant efforts by industry and billions of euros of investments in Research and Development, the sector is on the right path to reducing CO2 emissions. With respect to long-term CO2 targets, the ACEA position is that the 2025 and 2030 targets set by the EU Commission are very ambitious and will require breakthroughs in technologies, a new refueling infrastructure and a swift renewal of the car fleet on Europe’s roads. This will be a tough challenge, and all relevant players will have to combine their efforts, including the fuel and energy sectors and policy makers. It is essential that personal mobility remain affordable, to ensure that new technologies are accepted by the consumer. Market demand will be key in reaching today’s and future targets.

### **How have you influenced, or are you attempting to influence their position?**

Through ACEA, which interfaces on a regular basis with the major European institutions, FCA has promoted a constructive dialogue with institutions in in the following priority fields: connected and automated driving; competitiveness; international trade; market and economy; environment and sustainability; R&D; safety; and transport policy. FCA is a founding member of the Association and contributes both financially through a membership fee and operationally through the Group experts’ participation in specific working groups and task forces.

### **Trade association**

ANFAEVA (Associacao Nacional dos Fabricantes de Veiculos Automotores )

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

Consistent

### **Please explain the trade association’s position**

In Brazil, the Group has long been an active member of the Associacao Nacional dos Fabricantes de Veiculos Automotores (ANFAVEA). This nationwide association unites the country’s automakers with the purpose of addressing industry and market issues affecting the automotive sector.

### **How have you influenced, or are you attempting to influence their position?**

FCA is represented on the Board of Directors of the ANFAVEA. As a member, FCA engages in constant dialogue with the government to monitor legislation on fuel consumption such as the ROTA2030 program which establishes a minimum average vehicle energy efficiency for 2022 expressed in MJ/km. The goal of energy efficiency of each company will be determined by the mass weighted by sales volume. FCA is a signatory to the ROTA2030 legislation and participates in PBEV, the government’s INMETRO vehicle fuel consumption labeling program. The Group plays an active role in several technical committees and coordinates the Energy and Environmental Commission.

### **Trade association**

AEA (Brazilian Association of Automotive Engineering)

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

Consistent

### **Please explain the trade association’s position**

The Brazilian Association of Automotive Engineering (AEA) is a nonprofit organization that aims to be a neutral forum for discussion on strategic issues relating to national automotive engineering with the direct involvement of the automotive industry, government agencies, educational and research institutions, international organizations and society in general. Currently, the organization has more than 70 member companies from different segments of the automotive sector that actively participate in technical committees, working groups, workshops, events, courses and projects for the development of the national automotive engineering field.

### **How have you influenced, or are you attempting to influence their position?**

AEA participates, as an independent association, in national discussions on significant topics either for society or for the industry. FCA participates actively in ongoing discussions on the development of new fuels and blends with renewable fuels such as ethanol and biodiesel and coordinates the Committee of Car Emission and Consumption.

## **C12.3e**

### **(C12.3e) Provide details of the other engagement activities that you undertake.**

FCA, through CRF, our research center in Europe, plays an active role in the European Technology Platforms. CRF is the focal point for collaborative research programs on topics related to, among others, autonomous driving; connectivity; electrification and eco-driving; lightweighting and materials; and circular economy initiatives. During 2018, CRF was involved in 130 collaborative projects. FCA is involved in several stakeholder organizations that support the European Commission with the mission to define priorities and guidelines on mobility research, such as the European Technology Platforms (e.g., ERTRAC for road transport, NANOfuture on nanotechnologies, EuMaT for advanced material and technologies, EPoSS for smart systems integration and MANUFUTURE for manufacturing and production processes), Public-Private Partnerships (e.g., European Green Vehicle Initiative, Factories of the Future) and research and development organizations (e.g., EUCAR, the European Council for Automotive R&D). FCA, via OICA, contributes with senior expertise to the UN-ECE Working Party 29 GRVA on automated/autonomous and connected vehicles. The WP29, as a UN technical task force, will develop worldwide regulatory proposals about automated driving systems and technologies. In Italy, dialogue focuses on the achievement of a sustainable, safe and efficient national transport system supported by smart connectivity services. With the aim of fostering strategic priorities, the Italian Ministry for Research has established 8 “National Technology Clusters” that will operate in accordance with EU planning, especially with regard to the European Horizon 2020 research program. FCA is playing a leading role in the “Land and sea surface mobility vehicles and systems” Cluster to support central and regional policies for sustainable mobility of people and freight.

FCA also collaborates as a Group on research projects with key institutions across the North America region. FCA’s Automotive Research & Development Centre in Canada works with leading North American engineering institutions in the areas of materials and virtual engineering and validation.

FCA US is a member of the United States Council for Automotive Research (USCAR), a collaborative technology organization aimed at strengthening the technology base of the U.S. auto industry through cooperative research and development. Participation in USCAR provides the Company with access to more than 400 projects with national laboratories, research centers, industry partners and universities in conjunction with U. S. DRIVE, (United States Driving Research and Innovation for Vehicle efficiency and Energy sustainability), a partnership between USCAR, the U.S. Department of Energy (DOE), and energy and utility companies. USCAR is also involved, through collaboration with the United States Advanced Battery Consortium (USABC), with 25 active and completed advanced battery technology programs with a total cost-shared value of nearly €73 million. The USCAR/USABC/DOE collaboration allows for a total of approximately €106 million of cost-shared funding over a five-year period for the advancement of battery technology. The emphasis of this collaboration is to accelerate the development of automotive battery technology among industry partners within the U.S.

## **C12.3f**

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

The FCA Group is committed to conducting its government and public institution relations including lobbying in accordance with applicable laws and ethics rules as well as in full compliance with the FCA Code of Conduct and any applicable local procedures. The FCA Group aims to contribute positively to the future development of regulations and standards in the automotive industry and in all other sectors related to the mobility of people and goods. The FCA Group’s relations with government agencies and public institutions are managed by duly designated departments such as Institutional Relations and External Affairs. The results of these activities are reviewed by the highest management levels, thus assuring consistency of all engagement activities with the Group’s strategy on multiple topics, including climate change. At the operational level, FCA’s companies and operating regions have their own institutional relations/external affairs departments, with representative offices in key areas of presence (e.g., Brussels for EMEA, Washington D.C. for North America), directly reporting to the respective Chief Operating Officers (COOs). COOs are members of the Group Executive Council (GEC), a group led by the CEO and composed of senior leadership from regional operations, brands, industrial processes, and support/corporate functions. The GEC approves operating guidelines and plays a vital role in ensuring that sustainability efforts are aligned with economic and business objectives. It approves Sustainability Targets, and evaluates their consistency with the Business Plan and strategy. These targets include long term commitments from FCA to fight climate change, such as reducing the CO2 emissions of its products and processes. FCA believes that effective, long-lasting results to address climate change can only be achieved through an integrated approach involving energy producers, manufacturers (including suppliers), academia, consumers, government and the financial community. The value of continual multi- stakeholder engagement on material aspects such as CO2 emissions is leveraged and maximized by sector memberships and collaboration with public institutions. Europe: the Group belongs to trade associations such as ACEA for passenger cars and commercial vehicles. FCA is also a member of NGV Italy, NGVA Europe and NGV America. FCA participates in working groups such as the ERT for industrial leaders. The U.S.: the Alliance of Automobile Manufacturers is the leading advocacy group for the U.S. auto industry. The organization provides FCA US and the auto industry with a united voice on U.S. federal and state regulatory, and legislative matters. Brazil: FCA is an active member of the Associação Nacional dos Fabricantes de Veículos Automotores (ANFAVEA). This association addresses industry and market issues affecting the sector as well as coordinates/protects collective interests of its members. FCA engages in constant dialogue with government to monitor legislation on fuel consumption. Currently Brazil’s ROTA2030 program establishes a minimum average vehicle energy efficiency for 2022 expressed in MJ/km. The goal of energy efficiency of each company will be determined by the mass weighted by sales volume. FCA is a signatory to the ROTA2030 legislation and participates in PBEV, the government’s INMETRO vehicle fuel consumption labeling program. China: FCA also plays an active role across the APAC region, consistent with our overall climate change strategy. The Group product portfolio, technological solutions and R&D activities are the best examples of how the Company pursues its responsibility against climate change and positively effects change within the country. In general, the definition of regulations for CO2 emission limits in the various regions aligns with FCA product strategy focused primarily on the development of increasingly efficient technologies for conventional engines; the expansion of the use of alternative fuels (such as natural gas and biofuels); the development of alternative propulsion systems (such as hybrid or electric solutions), based on the specific energy needs and fuel availability of the various countries; the continuous efforts to cut plant energy consumption levels and the promotion of renewable energy and the adoption of low-emission transport.

## **C12.4**

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

### **Publication**

In mainstream reports

### **Status**

Complete

### **Attach the document**

[FCA 2018 Annual Report.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/HiEsNEvN9k-36XDd1VoMGg/FCA2018AnnualReport.pdf)

### **Page/Section reference**

Content related to climate change and CO2 emissions can be found at, but are not limited to, pages 10, 22-26, 38-40, 45, 74, 78, 86-87, 148, 186, 238 and refer to the sections: Message from the Chairman and the CEO; Overview of Our Business; Environmental and Other Regulatory Matters; Financial Overview; Risk Management; Risk Factors; Non-Financial Information; Notes to the Consolidated Financial Statements.

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

### **Comment**

FCA Annual Report is presented annually in the Annual General Meeting, usually in April.

### **Publication**

In voluntary sustainability report

### **Status**

Complete

### **Attach the document**

[FCA 2018 Sustainability Report.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/hixYDMOtk0miRyPmG59IKQ/FCA2018SustainabilityReport.pdf)

### **Page/Section reference**

Content related to climate change and CO2 emissions can be found at, but are not limited to, pages 5, 7, 12, 23-25, 28-30, 36-37, 39-41, 67-80, 90-91, 97-98, 102-105, 118-122, 134 and refer to the sections: Message from the Chairman and the CEO; Business Model and Governance; Products and Customers; Production and Supply Chain; Supplemental Information.

### **Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

### **Comment**

FCA Sustainability Report is presented annually in the Annual General Meeting, usually in April.

### **Publication**

In voluntary communications

### **Status**

Complete

### **Attach the document**

[FCA 2018 advertising.pdf](https://www.cdp.net/en/formatted_responses/files?file_path=k9me76vz7u2sozvqoi2gbw-cdp-credit360-com/fCyfE_Iv8UWry8NjIIRXAg/FCA2018advertising.pdf)

### **Page/Section reference**

page 1 of the 1 page document, in the footnote

### **Content elements**

Emissions figures

### **Comment**

FCA advertising contains emission figures for the different versions of model presented.

## **C14. Signoff**

## **C-FI**

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

CERTAIN DEFINED TERMS.

In this document, unless otherwise specified, the terms “we”, “our”, “us”, the “Group”, the “Company” and “FCA” refer to Fiat Chrysler Automobiles N.V., together with its subsidiaries and its predecessor prior to the completion of the merger of Fiat S.p.A. with and into Fiat Investments N.V. on October 12, 2014 (at which time Fiat Investments N.V. was renamed Fiat Chrysler Automobiles N.V., or “FCA NV”), or any one or more of them, as the context may require. References in this document to “Fiat” refer solely to Fiat S.p.A., the predecessor of FCA NV prior to the Merger. References to “FCA US” refer to FCA US LLC, together with its direct and indirect subsidiaries. All references in this document to “Euro” and “€” refer to the currency issued by the European Central Bank. The Group’s financial information is presented in Euro. All references to “U.S. Dollars”, “U.S. Dollar”, “U.S.$” and “$” refer to the currency of the United States of America (or “U.S.”).

FORWARD-LOOKING STATEMENTS.

Statements contained in this document, particularly those regarding possible or assumed future performance, competitive strengths, costs, dividends, reserves and growth of FCA, industry growth and other trends and projections and estimated company earnings are “forward-looking statements” that contain risks and uncertainties. In some cases, words such as “may”, “will”, “expect”, “could”, “should”, “intend”, “estimate”, “anticipate”, “believe”, “remain”, “on track”, “design”, “target”, “objective”, “goal”, “forecast”, “projection”, “outlook”, “prospects”, “plan”, or similar terms are used to identify forward-looking statements. These forward-looking statements reflect the respective current views of the Group with respect to future events and involve significant risks and uncertainties that could cause actual results to differ materially. These factors include, without limitation: • our ability to launch products successfully and to maintain vehicle shipment volumes; • changes in the global financial markets, general economic environment and changes in demand for automotive products, which is subject to cyclicality; • changes in local economic and political conditions, changes in trade policy and the imposition of global and regional tariffs or tariffs targeted to the automotive industry, the enactment of tax reforms or other changes in tax laws and regulations; • our ability to expand certain of our brands globally; • our ability to offer innovative, attractive products; • our ability to develop, manufacture and sell vehicles with advanced features, including enhanced electrification, connectivity and autonomous-driving characteristics; • various types of claims, lawsuits, governmental investigations and other contingencies affecting us, including product liability and warranty claims and environmental claims, investigations and lawsuits; • material operating expenditures in relation to compliance with environmental, health and safety regulations; • the intense level of competition in the automotive industry, which may increase due to consolidation; • exposure to shortfalls in the funding of our defined benefit pension plans; • our ability to provide or arrange for access to adequate financing for our dealers and retail customers and associated risks related to the establishment and operations of financial services companies, including capital required to be deployed to financial services; • our ability to access funding to execute our business plan and improve our business, financial condition and results of operations; • a significant significant malfunction, disruption or security breach compromising our information technology systems or the electronic control systems contained in our vehicles; • our ability to realize anticipated benefits from joint venture arrangements; • our ability to successfully implement and execute strategic initiatives and transactions, including our plans to separate certain businesses; • disruptions arising from political, social and economic instability; • risks associated with our relationships with employees, dealers and suppliers; • increases in costs, disruptions of supply or shortages of raw materials; • developments in labor and industrial relations and developments in applicable labor laws; • exchange rate fluctuations, interest rate changes, credit risk and other market risks; • political and civil unrest; • earthquakes or other disasters; and • other factors discussed elsewhere in this document. Furthermore, in light of the inherent difficulty in forecasting future results, any estimates or forecasts of particular periods that are provided in this document are uncertain. We expressly disclaim and do not assume any liability in connection with any inaccuracies in any of the forward-looking statements in this document or in connection with any use by any third party of such forward-looking statements. Actual results could differ materially from those anticipated in such forward-looking statements. We do not undertake an obligation to update or revise publicly any forward-looking statements.

PLEASE NOTE THAT: all information reported in this document relates to FCA as a whole, unless otherwise indicated; the term "FCA US" is used to identify "FCA US LLC" (formerly known as "Chrysler Group LLC"), together with its direct and indirect subsidiaries. Unless otherwise specified, the terms “FCA”, or simply “Group” are used to identify Fiat Chrysler Automobiles N.V., together with its direct and indirect subsidiaries. Consistent with the reporting format used for the 2018 Sustainability Report and Annual Report, some of the required information is broken down by company/operating segment. Accordingly, beginning in Quarter 1 2012, the operations of mass-market vehicles are attributed to the four Regions: EMEA (Europe, the Middle East and Africa), North America (U.S., Canada and Mexico), LATAM (South and Central America), APAC (Asia Pacific). For additional details see FCA 2018 Annual Report at the link: www.fcagroup.com/en-US/investors/financial\_regulatory/financial\_reports/Pages/2018.aspx. WHEN NEEDED FOR SPACE LIMITS in comment boxes, we use abbreviations as follows: FCA = Fiat Chrysler Automobiles; MM = Magneti Marelli; WCM = World Class Manufacturing; EMS = Environmental Management System; EnMS = Energy Management System; AR = Annual Report; SR = Sustainability Report; ST = Sustainability Team; CSR = Corporate Social Responsibility; SSSA = Supplier Sustainability Self Assessment; ACEA= European Automobile Manufacturers’ Association; NGV= Natural Gas Vehicle; CNG=Compressed Natural Gas; FFV= Flexible-Fuel Vehicles; ERT=European Round Table; IACS=International After Sales Customer Satisfaction Survey. When discussing vehicles sold in the U.S., reference is often made to Model Year (MY) meaning the year used to designate a discrete vehicle model, irrespective of the calendar year in which the vehicle is actually produced, provided that the production period does not exceed 24 months.

## **C14.1**

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

|  |  |  |
| --- | --- | --- |
|  | **Job title** | **Corresponding job category** |
| Row 1 | Group Executive Council (GEC) member, Chief Audit, Sustainability and Compliance Officer (functionally equivalent to CSO) of FCA N.V. The GEC is a decision-making body at FCA | Chief Sustainability Officer (CSO) |