

**Module: Introduction****Page: Introduction****CC0.1****Introduction**

Please give a general description and introduction to your organization.

At Eaton, our vision is to improve the quality of life and the environment through the use of our power management technologies and services. And we live this vision every day by being active stewards of our environment — minimizing the impact of our operations and developing innovative solutions for our customers that are efficient in their use of the world's natural resources.

Here are a few examples of how Eaton employees around the world are living our vision:

~~ We recognized 95 Eaton facilities for achieving our zero waste to landfill goal. These efforts resulted in an almost 20 percent absolute reduction in landfilled waste — more than 6,000 metric tons. This also had the secondary benefit of eliminating more than 1,000 metric tons of carbon dioxide emissions that would otherwise have been released during the transportation and storage of landfilled wastes.

~~ We completed more than 60 energy reduction projects throughout our facilities. These included the installation of LED and other energy-efficient lighting, heat recovery systems, and other operational improvements. These projects reduced a cumulative 3,000 metric tons of greenhouse gases during the year.

~~ We joined the Solutions and Innovation Zone at COP22, the United Nations Climate Change Conference in Marrakech, Morocco. In conjunction, we celebrated the opening of our new manufacturing facility in Casablanca, which will serve as the pilot manufacturing site for energy storage battery packs and systems, supplying thousands of households and businesses across Europe, the Middle East and Africa.

~~ Through our continued partnership with Harvard's Sustainability and Health Initiative for NetPositive Enterprise and as a founding member of The Net Positive Project, we are working to help companies drive financial success and create "Net Positive" impacts by putting more back into society, the environment and the global economy than we take out.

In addition, our global celebration of "World Environment Month" brought together more than 25,000 Eaton employees over the past three years to participate in activities such as community cleanup, tree planting, waste reduction and sustainability education programs.

Environmental issues are now global issues, and the world is taking notice. It's a responsibility we gladly accept because we know that we have the power to make a difference.

Craig Arnold

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**CC0.2**

**Reporting Year**

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

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

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

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

**Enter Periods that will be disclosed**

Thu 01 Oct 2015 - Fri 30 Sep 2016

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**CC0.3**

**Country list configuration**

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

**Select country**

United States of America

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**CC0.4****Currency selection**

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

USD(\$)

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**CC0.6****Modules**

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email [respond@cdp.net](mailto:respond@cdp.net).

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

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**Further Information**

**Module: Management**

**Page: CC1. Governance**

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**CC1.1**

**Where is the highest level of direct responsibility for climate change within your organization?**

Board or individual/sub-set of the Board or other committee appointed by the Board

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**CC1.1a**

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

The senior vice president of Environment, Health & Safety (EHS), who reports to the executive vice president of Eaton Business System (EBS), manages our EHS program, including activities associated with climate change. Together, these executives ensure linkage to all critical company practices, processes, and operations. Every 18 months, the SVP reports to the Governance Committee of our Board of Directors. The SVP also reports to the CEO, who provides quarterly updates to the Board about EHS progress.

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**CC1.2**

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

Yes

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**CC1.2a**

**Please provide further details on the incentives provided for the management of climate change issues**

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Emissions reduction target	For 2016 - Meet or exceed the following emissions reduction targets (on both an absolute and indexed basis): achieve 0 increase in GHG emissions; reduce waste to landfill by 3 percent, thereby reducing GHG emissions; and reduce water consumption by 3 percent.
All employees	Recognition (non-monetary)	Energy reduction project Efficiency project	Eaton provides a variety of awards programs that celebrate excellence in the workplace, including energy efficiency and sustainability. Craig Arnold, chairman and CEO, announced Eaton's latest Gamechangers during the opening ceremony of the 2016 Worldwide Leadership Conference at Eaton Center in Beachwood, Ohio, in May. The prestigious Gamechangers Award is presented each time the company holds its Worldwide Leadership Conference. The award honors employees who drive innovation that leads to breakthrough results. Eaton's Majo Ceur, manager, Advanced Powertrain Innovation and Technology, Vehicle Group, Turin, Italy, was one of the winners. In the early 2000s, Ceur started to develop the

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			concept of a Valvetrain Carrier, an integrated Valvetrain system that replaces multiple components in the cylinder head of the engine. Valve Actuation technologies help improve fuel economy and reduce emissions by optimizing the control and flow of engine air and exhaust gases. The Valvetrain Carrier increases Eaton's content per engine and improves profitability, with manufacturing margins on the Carrier exceeding 30 percent, compared to a margin of 25 percent on a standard Valve Actuation set. In 2006, Ford Motor Company applied the Valvetrain Carrier to its Puma diesel engine, a mainstream Light Duty engine used across the world on small commercial vehicles. In 2010, the Carrier started production at the Rivarolo, Italy, and Bielsko-Biala, Poland, plants and is reaching peak volumes in 2015-2016. Cezur continues to work relentlessly to create a sustainable pipeline of products for the Valvetrain business. His most recent area of study is Variable Valve Actuation for diesel engines. Other Eaton awards programs that include efficiency/sustainability achievement include Engineer of the Year, Eaton Business Excellence, Zero Waste to Landfill and others.
All employees	Recognition (non-monetary)	Emissions reduction project	Eaton has a Zero Waste-to-Landfill (ZWTL) Award for facilities that eliminate landfill waste. During 2016, 25 Eaton facilities achieved ZWTL status. By the end of 2016, 95 Eaton locations were ZWTL, including 86 manufacturing sites. We modeled our zero-waste benchmark on standards set by an internationally recognized certifying organization. By reducing the volume of waste sent to landfills, we help minimize the release of GHG emissions, especially methane, a harmful GHG 20 times more potent than carbon dioxide. In 2016 these efforts resulted in an almost 20 percent absolute reduction in landfilled waste --more than 6,000 metric tons -- and the elimination of more than 1,000 metric tons of GHG emissions (using WARM emission factors for mixed municipal solid waste (MSW) -- the largest category of waste removed from landfill).

**Further Information**

**Page: CC2. Strategy**

**CC2.1**

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

Integrated into multi-disciplinary company wide risk management processes

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**CC2.1a**

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	North and South America, Europe, Asia and the Middle East	> 6 years	

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**CC2.1b**

Please describe how your risk and opportunity identification processes are applied at both company and asset level

Company level: Under the direct supervision of the Board of Directors, risks/opportunities are assessed at the company level by Eaton's Senior Leadership Committee (SLC), which is the most senior management committee within the corporation. Risk is managed on an enterprise-wide basis using a unified risk management framework. Eaton typically identifies 10-14 major risks each year that could materially affect the company's businesses, financial condition or results of operations. The SLC appoints company task forces (led by SLC members) to manage these risks, including those influenced by climate change. Results are reported to the Board of Directors on an annual basis or more frequently in a crisis situation.

Asset level: Eaton conducts strategic planning and risk analysis at all of its facilities and associated businesses. One of the factors considered involves potential environmental impacts to the business. Physical risks such as changing weather patterns, rising temperatures and other natural disasters are reviewed. An outcome of these meetings is the development of local response plans designed to address catastrophic occurrences. Voluntary projects to reduce carbon emissions and contribute to climate change mitigation are also assessed, along with mandatory projects for environmental remediation and/or regulation.

For opportunities at both the company and asset level, Eaton uses the Eaton Business System (EBS), which provides internal processes and tools that ensure enterprise-wide alignment and compliance, collection and reporting information to influence various business opportunities, strategies and priorities, and rapid recognition and transfer of best practices. EBS encompasses Eaton's core values, policies and processes used to conduct business and measure, assess and improve performance, including factors influenced by climate change.

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**CC2.1c**

**How do you prioritize the risks and opportunities identified?**

Factors used to systematically define and prioritize risks and opportunities at all levels of the company, including those related to climate change, are: probability (likeliness that an event will actually occur); magnitude of damage (financial, reputational, societal); time horizon (how long Eaton will be exposed to the risk); correlation (how various risks might be related to each other); litigation; environmental regulation and remediation; and volatility of end markets that Eaton serves. For environmental and safety risks, issues planning, and prioritizing, Eaton uses MESH (Management of Environment, Safety, Security and Health), a globally deployed, unified system that consolidates all EHS and compliance programs into one integrated management system. MESH has three components: Process & Compliance; Culture; and Results. Process & Compliance sets requirements in 10 EHS categories and drives regulatory compliance at the facility. Culture relates to how well each facility demonstrates EHS engagement at all levels. The Results component focuses on achieving performance metrics. Targets, objectives, priorities and performance goals are set for each component. Eaton facilities conduct self-assessments each year, and undergo a corporate MESH assessment every three years. Results are reported each year to Senior VP, EHS and, if necessary, to the chief executive of the appropriate Eaton business, and the Board of Directors. To prioritize climate change opportunities, Eaton uses the Eaton Business System (EBS), which provides internal processes and tools that ensure enterprise-wide alignment and compliance, collection and reporting information to influence various business opportunities, strategies and priorities, and rapid recognition and transfer of best practices. EBS encompasses Eaton’s core values, policies and processes used to conduct business and measure, assess and improve performance, including factors influenced by climate change.

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**CC2.1d**

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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**CC2.2**

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

Yes

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**CC2.2a**

**Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process**

(i) Internal process for collecting and reporting information to influence the strategy: We use the Eaton Business System (EBS), which provides a disciplined set of internal processes and tools that ensure enterprise-wide alignment and compliance, collection and reporting information to influence various business strategies, and rapid recognition and transfer of best practices. EBS encompasses Eaton's core values, policies and processes used to conduct business and measure, assess and improve performance, including factors influenced by climate change. For example, EBS provides these processes:

- Eaton Lean Six Sigma – ELSS eliminates waste, simplifies processes, reduces cycle times and enables us to more effectively deploy resources within quality-intensive systems.

- PROLaunch – a set of integrated processes designed to guide our program and project management processes, including product development from concept through production launch. Climate change has influenced this strategy by prompting the company to establish its “Design for the Environment” (DFE) program as part of this process. Using DFE, we are looking at our products to determine the environmental impact throughout the life of the product, and developing ways to minimize impact and help mitigate climate change.

(ii) One example of how the business strategy has been influenced is the large role of R&D. Eaton devoted \$589 million to R&D in 2016, the majority of which was spent to develop products and solutions that reduce the carbon footprints of customers and consumers as the world seeks ways to mitigate climate change. Over the past five years, we have invested approximately \$2.8 billion in research and development. These technology advancements will play a key role in meeting or exceeding Eaton's projected growth of segment margins from 15% in 2016 to 17-18% in 2020.

(iii) Climate change aspects influencing this strategy include: • The pressure on global energy costs and availability leading to increasing costs of extraction, processing, distribution and utilization; • An evolving regulatory regime focusing on carbon reduction, • Eaton customers are demanding new carbon reduction technologies to respond to the potential impact of climate change; • The continuing efforts of local, state, federal and international governments to jump start robust “green energy” industries through credits, grants, and other incentives; opportunities to develop green businesses.

(iv) Climate change has influenced our short-term (1-5 years) strategy by leading Eaton to develop emissions reduction targets and energy-saving activities to achieve them. We've reduced GHG emissions by 25 percent (compared to a 2006 baseline). And we achieved our commitment to the U.S. Department of Energy's “Better Buildings, Better Plants” program to reduce our energy use by 25 percent by 2016 (2006 baseline). We're achieving our goals through investments in worldwide energy-saving projects that include LED lighting upgrades, renewable energy installations, building shell insulation, equipment upgrades, new energy efficient facilities, and more. In 2016, 96 projects costing \$1.79 million helped reduce GHG emissions by 4106 metric tonnes. Also, Eaton devoted \$589 million to R&D in 2016 (see R&D description in (ii) above).

(v) Climate change has influenced our long-term strategy (> 5 years) as we confront future pressure on global energy costs and availability. As a result, the ever-increasing cost of extraction, processing, distribution and utilization will continue to power our business. Our customers have and will continue to respond to the strong economic, sustainability and regulatory forces occasioned by this energy megatrend. They need new technologies to reduce their use of energy and improve their own carbon footprints. Our strategy is to invest heavily in leading-edge technologies that improve the energy efficiency of buildings, vehicles and machinery, help to conserve natural resources, shrink the carbon footprints of our customers, and reduce the environmental impact of everyday life.

(vi) Strategic advantage: Eaton has many advanced technologies and a strong reputation for applying that technology to commercial advantage for our customers. As the world becomes more focused on energy conservation and reducing GHG emissions, Eaton is very well-positioned. Our largest business – Electrical – utilizes a broad array of applications that helps our customers conserve energy and reduce carbon footprints. One of the major concerns today is energy efficiency in buildings, where Eaton provides many products and solutions that contribute to LEED points. Also, Eaton spent \$589 million for R&D to continue to launch innovative products and solutions that help our customers meet their most demanding energy and emissions requirements. Eaton's sustained R&D investments contribute to our improved profitability (see R&D description in (ii) above).

(vii) Eaton's most substantial business decisions based on climate change aspects include:

Investment in emissions reduction – In 2016, Eaton completed 96 projects that included lighting optimization, building shell insulation, equipment upgrades, heat recovery, compressed air installation, ventilator control and energy management which reduced GHG emissions by 4106 metric tons at a cost of \$1,079,000. Potential Financial implications: annual energy savings projected at \$767,000. Eaton fulfilled its pledge to reduce global energy use by 25 percent, indexed to sales, between 2006 and 2016, thereby reducing our GHG emissions to help mitigate our own impact on climate change. Climate change aspect: the evolving regulatory regime focusing on carbon reduction.

R&D - Eaton in 2016 invested \$589 million in research and development, helping solve the needs of our customers' most demanding sustainability challenges in the use of electrical, fluid and mechanical power. (see R&D description in (ii) above). Aspect: • Eaton customers are demanding new carbon reduction technologies to response to the threat of climate change.

Acquisition - In 2016, we continued the integration of electrical equipment supplier Cooper Industries purchased by Eaton. Cooper provides complementary technologies that further accelerate Eaton's growth as a global integrated power management company focused on the rising costs and increasing environmental impact of the world's growing energy use. In 2016, Eaton achieved \$45 million in incremental synergy profits from the Cooper integration. Aspect: opportunities to develop green businesses.

(viii) As we work on establishing our long-term sustainability goals, Eaton is leaning toward goals that do our part for a 2-degree solution based on the Paris Agreement.

(ix) We do not yet use forward-looking scenario analyses, but we are investigating how Eaton can include them into our business strategy and/or financial planning.

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#### CC2.2b

Please explain why climate change is not integrated into your business strategy

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#### CC2.2c

**Does your company use an internal price on carbon?**

No, and we currently don't anticipate doing so in the next 2 years

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#### CC2.2d

Please provide details and examples of how your company uses an internal price on carbon

**CC2.3**

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

- Direct engagement with policy makers
- Trade associations
- Other

**CC2.3a**

**On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Other: Corporate Average Fuel Economy standards	Support	Eaton endorses the EPA's new Corporate Average Fuel Economy (CAFÉ) and GHG standards for automotive passenger vehicles which mandate that vehicle fleets achieve an average of 54.5 mpg by 2025, thereby reducing fuel use and carbon emissions. Eaton also supports the US EPA phase two of the CAFE and GHG rule for commercial trucks that will set standards for 2018 thru 2025. Our work relates to testing, compliance and incentives to drive adoption of fuel efficient technologies through aggressive GHG and CAFÉ standards. We worked with stakeholders and the agencies to identify technologies that will help OEM's meet the standards with improved performance in the next phase of rulemaking.	Approve the CAFE standards for automotive passenger vehicles which mandate that vehicle fleets achieve an average of 54.5 mpg by 2025, thereby reducing fuel use and carbon emissions. Also, propose rules in the commercial vehicle segment that drive adoption of fuel efficient technologies, improve performance, and reduce costs for truck fleets. The EPA will be reviewing the CAFE standards as part of its mid-term review process. Eaton submitted comments regarding technologies to meet the standards.

**CC2.3b**

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

Yes

CC2.3c

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
National Electrical Manufacturers Assoc.	Consistent	<p>NEMA strongly supports a climate policy that achieves meaningful greenhouse gas reductions at the lowest practicable costs. NEMA members are leaders in providing demand management and energy-efficient products and technologies to the market. These technologies, if deployed and utilized, lead to far more efficient use of energy sources, be they fossil fuels or others, and, in turn, reduce the amount of greenhouse gases across all sectors of our economy. NEMA's member companies stand committed to incorporating the energy-efficient products and equipment that our members manufacture, all as part of our industry's efforts to reduce GHGs.</p>	<p>Eaton has worked with advocates at the State level to promote the adoption of legislation, regulations, codes and standards for energy efficient measures that reduce GHG emissions and facility operational costs. Topic: Eaton supports public policies that encourage schools and public buildings to follow Leadership in Energy and Environmental Design (LEED) practices. We believe that LEED serves as a vital blueprint for building design, construction, operation, and maintenance, providing cost-effective, best practice specifications that ensure that public buildings are utilizing the energy efficient technologies that provide operational savings and reduce emissions. Method: we are working through trade organizations and government (DOE). Actions advocating: develop rule-making and products/technologies strategies for reasonable LEED practices in public buildings as a means of meeting requirements of the EPA's Clean Power Plan. Nature of engagement: meet with legislators; provide information on Eaton's energy efficiency products.</p>
Business Roundtable	Consistent	<p>The Business Roundtable believes that improving energy efficiency, increasing utilization of renewables, continuing to advance technology and engaging globally are essential in order to reduce world-wide GHG emissions and mitigate climate change while ensuring economic growth. Three strategies that are likely to form the foundation of a successful sustainable growth: (1) more efficiently consume electricity and heating fuels in homes and businesses; (2) leverage domestic resources to produce cost-effective, low-carbon electricity; and (3) modernize the transportation fleet and diversify the transportation fuel mix.</p>	<p>Eaton supports re-introduction of legislation (S.2012) in which programs related to energy cyber security, efficiency, infrastructure and supply management would be established, expanded or modified. The bill would also reauthorize Energy Department science programs, the Advanced Research Projects Agency-Energy, the Land and Water Conservation Fund, and grants to promote efficiency in commercial and residential buildings. The measure would repeal the requirement that new federal buildings and those undergoing major renovations phase out the use of energy derived from fossil fuels by 2030. Eaton also supports S.385 which promotes the use of energy efficiency technologies in the residential, commercial, and industrial sectors of our economy. The result of the lowered consumption and</p>

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
			<p>investments in energy efficient technologies is good for our economy and good for our environment. Method: We are working with government agencies (DOE, GSA) and trade associations. Topic: promote energy efficiencies as exemplified by Eaton's products/technologies which can help reduce energy use by up to 30 percent. Nature of engagement: we have hosted product/technology forums for public officials, and we have engaged in consultation and interaction with DOE and GSA. Actions advocating: re-introduction and approval of legislation S.212 and approval of S.385.</p>

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**CC2.3d**

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

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**CC2.3e**

**Please provide details of the other engagement activities that you undertake**

Eaton works with the American Wind Energy Association to promote extension of the U.S. production tax credits and energy standards for wind energy. Method: We are working with government agencies (DOE, GSA) and trade associations. Topic: promote incentives for wind energy production as exemplified by Eaton's products/technologies for construction and operation of wind turbines. Nature of engagement: we have hosted product/technology forums for public officials, and we have engaged in consultation and interaction with state and federal legislators, DOE and GSA. Actions advocating: extension of tax credit for wind energy production.

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**CC2.3f**

**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?**

Eaton has created an Executive Leadership Team comprised of the senior vice president of Environment, Health and Safety (EHS) and the chief operating officers of Eaton's Electrical and Hydraulic businesses to guide and oversee processes to achieve our sustainability and environmental goals that are most important to our customers, investors, communities and employees. This team ensures that our direct and indirect activities are consistent with our overall climate change strategy. The team reports directly to Eaton's Senior Leadership committee (headed by Eaton's chairman and CEO and, if necessary, to the Board of Directors).

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CC2.3g

Please explain why you do not engage with policy makers

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**Further Information**

**Page: CC3. Targets and Initiatives**

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CC3.1

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

Intensity target

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CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
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**CC3.1b**

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (location-based)	100%	0%	Metric tonnes CO2e per unit revenue	2015	48.4	2016	No, but we anticipate setting one in the next 2 years	The indexed emission rate for 2015 was 48.4 metric tons of carbon dioxide per million dollars of sales.

**CC3.1c**

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

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	5.3	No change	0	Scope 3 emissions are not included in

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
					Eaton's target.

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	100%	96%	Eaton virtually met our goal. Our year over year indexed emissions increased 0.2% compared to a target increase of 0%. We reduced our absolute emissions by 5.1%, compared to our anticipated absolute

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
			reduction of 5.3%, meaning we met 96% of our target in the allotted time.

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**CC3.1f**

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

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**CC3.2**

**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

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**CC3.2a**

**Please 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	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	<p>As a power management company, Eaton has long focused on developing innovative technologies, products and solutions that help our customers meet challenging sustainability regulations and guidelines. During 2016, we invested \$589 million in research and development, helping answer the needs of our global customers now and in the future. Our cylinder deactivation system is the most direct way to reduce emissions and improve fuel economy through the driving cycle. Eaton was an early leader in the research and development of onboard refueling vapor recovery (ORVR) systems, which reduce hydrocarbon emissions by about 95 percent during refueling. China—the world's largest market for passenger and commercial vehicles—is implementing ORVR in early 2017. Eaton's electrical power control systems reduce power use and carbon emissions in buildings and homes. Our acquisition of Cooper Industries expanded our portfolio of electrical solutions with products such as LED lighting and critical smart-grid technologies for modern, sustainable electricity</p>	Low carbon product and avoided emissions	Other: Lifecycle Assessment using ISO 14040 and 14044 guidelines. the method used to determine the GHG footprint for all the products was IPCC GWP 100a.		More than 60% but less than or equal to 80%	<p>Examples of Eaton's innovative products, their function and the amount of GHG emissions that are eliminated by product use: The APR48-ES Energy Saver Rectifier helps communications network operators cut energy costs across the network through greater operating efficiency and to meet aggressive carbon footprint reduction targets. The Energy Saver rectifier operates with over 96% efficiency (4% waste), reducing waste energy by at least 50% compared to normal industry efficiencies of 89-92%. It offers potential global annual savings of one million metric tons of CO2 emissions for the telecom sector. Protection Station 650 and 800 are combined Uninterruptible Power System (UPS), surge suppressor, and multiple socket devices with improved energy efficiency provided by an EcoControl function that automatically disables peripherals when the master drive is turned off. Laboratory testing of a typical home computer system demonstrated annual power consumption of 165 kWh for the Protection Station compared to 231 kWh for similar products without the EcoControl</p>

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
	<p>delivery systems. Our product portfolio also includes hybrid powertrains that boost fuel economy and reduce emissions in commercial vehicles; hydraulic aircraft systems that reduce weight and save fuel; automotive superchargers for enhanced fuel economy; electrical and hydraulic products for solar power and wind turbine systems; and thousands more.</p>					<p>function. For 100,000 computers, the annual savings of 6,600,000 kWh reduces carbon emissions by 4,551 metric tons. Eaton Electrical Solutions combine several energy saving products into the most energy efficient package to address specific customer needs. Michigan's Detroit Metropolitan Airport selected Eaton's Cooper Lighting business to replace 6,050 existing parking garage fixtures with Eaton's energy-saving lighting products (from 210 watts to 60 watts). The conversion – using Eaton's McGraw-Edison Valet and Ventus light-emitting diode (LED) luminaires – will result in a 66 percent reduction in power consumption. The LED products also incorporate Eaton's Cooper Lighting LumaWatt Outdoor Wireless Control and Monitoring System to make it easier for the airport to effectively manage its lighting levels. The system reduces power usage by approx. 5 million kWh, resulting in a reduction of 35,000 metric tons of carbon dioxide in a five-year period.</p>

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

Yes

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**CC3.3a**

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

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	155	
To be implemented*	19	2108
Implementation commenced*	40	3052
Implemented*	96	4106
Not to be implemented	0	0

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**CC3.3b**

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

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Fugitive emissions reductions	In 2016, 25 of our facilities achieved zero waste-to-landfill status. 95 Eaton plants have now achieved that goal. We modeled our zero-waste benchmark on standards set by an internationally recognized certifying organization. By reducing the volume of waste sent to landfills, we help minimize the release of GHG emissions, especially methane, a harmful GHG 20 times more potent than carbon dioxide. In 2016 these efforts resulted in an almost 20 percent absolute reduction in landfilled waste – more than 6,000 metric tons -- and the elimination. of more than 1,000 metric tons of greenhouse gas emissions that otherwise would have been released during the transportation and storage of landfilled wastes.	1000	Scope 1	Voluntary	0	0	<1 year	Ongoing	
Energy efficiency: Processes	Eaton facilities reported 49 energy efficiency projects, including boilers, equipment upgrades, HVAC design, process improvements, compressed air, heat recovery and others.	1944	Scope 1 Scope 2 (location-based)	Voluntary	516000	434000	<1 year	21-30 years	
Energy efficiency: Building services	In 2016, 22 Eaton facilities completed lighting optimization programs that replaced inefficient lighting with cutting edge LED lights manufactured at company plants acquired during Eaton's purchase of Cooper Industries in 2012.	1162	Scope 1 Scope 2 (location-based)	Voluntary	251000	646000	1-3 years	6-10 years	

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**CC3.3c**

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

<b>Method</b>	<b>Comment</b>
Dedicated budget for energy efficiency	Energy/GHG reduction projects budgeted: We're using new technologies and processes to make our manufacturing plants around the world more energy efficient. In 2016, many of our aerospace, hydraulics, electrical and vehicle plants upgraded their facilities with energy-saving projects. Overall, Eaton completed 96 projects that included lighting optimization, building shell insulation, equipment upgrades, heat recovery, compressed air installation, ventilator control and energy management. which reduced GHG emissions by 4106 metric tons at a cost of \$1,079,000. Potential Financial implications: annual energy savings projected at \$767,000.
Partnering with governments on technology development	Eaton is using a \$2.4 million research grant from the U.S. Department of Energy (DOE) to explore the development of energy efficient lighting products that reduce GHG emissions. Eaton's research aims to improve the manufacturing speed of light-emitting diode (LED) fixtures by three times over the typical rate, reduce LED light engine costs and efficiency by five times and reduce assembly costs by approximately 50 percent. "This partnership with industry to produce affordable, efficient lighting will save consumers money and create American jobs," said Energy Secretary Ernest Moniz. "It's another example of how energy efficiency is a win-win proposition for our economy."
Employee engagement	Eaton lets employees at our local facilities determine where we donate a large share of our contributions, based on the needs in their communities, including sustainability projects. We engage our employees in all aspects of our approach, from design and manufacturing, customer support, internal footprint reduction through Green Teams and other programs. From 2014-16, more than 20,000 employees worldwide participated in our World Environment Month program.
Dedicated budget for low carbon product R&D	Eaton's R&D efforts are focused on our customers' needs for innovative products and solutions that improve energy efficiency and reduce carbon emissions. Eaton spent \$589 million in 2016 for R&D, the majority of which was used to develop power management products and solutions that improve energy efficiency and reduce carbon emissions.

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**CC3.3d**

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

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**Further Information**

CC4.1

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	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Eaton's annual report is now a web-only document. The GHG references are on p. 6.	<a href="https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/Eaton 2016 Annual Report pct_3066817.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/Eaton 2016 Annual Report pct_3066817.pdf</a>	We use GR-4 guidelines as our framework for mainstream reports. By reducing the use of paper in our annual report, we will substantially reduce the use of paper, and avoid GHG emissions (from production and delivery) that can lead to climate change.
In voluntary communications	Complete	On Eaton's sustainability web site. GHG emissions are listed on p. 3 of the attached PDF.	<a href="https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/2016 metrics pct_3099477.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/2016 metrics pct_3099477.pdf</a>	
In voluntary communications	Complete	"We Make What Matters Work" poster available on Eaton.com public web site	<a href="https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/We make what matters.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC4.1/We make what matters.pdf</a>	

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

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

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Air pollution limits	The US EPA issued final Carbon Pollution Standards for new, modified and reconstructed power plants, and proposed a federal plan to assist states in implementing the Clean Power Plan (CPP). Rules were finalized in late 2015, and they were immediately	Increased operational cost	3 to 6 years	Indirect (Client)	About as likely as not	Low	Without Eaton's efficiency improvements, the company would pay an estimated \$767,000 more per year in energy costs.	To address potential price spikes, improve energy efficiency and reduce GHG emissions, Eaton is focused on energy efficiency improvements in our facilities worldwide. In 2016 Eaton completed or commenced more than 96 projects	In 2016, Eaton completed or commenced more than 96 projects including lighting optimization, building shell insulation, equipment upgrades, heat recovery, compressed air installation, ventilator control and energy management.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>challenged in court by 28 states. If the original rules stand, states and utilities will likely be given ample flexibility and time needed to achieve these pollution reductions, while maintaining a reliable and affordable supply of electricity for rate payers and businesses.</p> <p>However, there is a short-term risk that shutting down coal plants, while making new plant construction virtually impossible, could threaten the national power grid's ability to supply peak power to prevent brownouts in the near-term, causing business disruptions and price spikes that may temporarily interrupt Eaton</p>							<p>including lighting optimization, building shell insulation, equipment upgrades, heat recovery, compressed air installation, ventilator control and energy management. These projects will eliminate about 4,106 metric tons of greenhouse gas emissions per year, and save more than \$767,000 in energy costs.</p>	<p>These projects cost approximately \$1.1 million which will eliminate about 4,106 metric tons of GHG emissions per year, and save more than \$767,000 in energy costs.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>production, as well as that of our customers. The regulation could have a negative impact on Eaton's Electrical business which provides products and services for plant construction and maintenance, including intelligent Smart Grid solutions to help automatically identify and address power events to improve power reliability, reduce energy use and minimize outages for customers. Also, power supply interruptions could impact operations at our manufacturing plants, as well as those of our suppliers, while the cost of electricity steadily increases due to reliance on more</p>								

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	expensive and less reliable renewable sources of power. However, risk impacts can be offset by new economic opportunities for Eaton, including products and services for plant retrofits to accommodate natural gas fuel; electrical power control systems for the efficient use of power and lower carbon emissions; wind and solar installations; and more.								
Fuel/energy taxes and regulations	EPA's proposed 2017-2025 LD CAFÉ/GHG standards represent an aggressive target of 4-5% improvement per year from a baseline of about 35 mpg (2016) for the national	Reduced demand for goods/services	>6 years	Direct	About as likely as not	Low-medium	Eaton's Vehicle business represents about 16% of Eaton's annual sales, or \$3.2 billion in 2016. We estimate that new products and technologies will add \$250 million of annual	Eaton conducts R&D to continue to launch innovative products and solutions that help our customers meet their most demanding energy and emissions	Eaton spent \$589 million for R&D in 2016. For example, Eaton offers the world's most complete line-up of fuel-saving hybrid systems for commercial vehicle applications.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>automotive fleet. However, these could be relaxed under a new administration. If the proposed CAFE standards are not changed, this will challenge the OEM's in terms of commercializing the necessary technologies while balancing against consumer preferences in size, weight, safety, and performance features. Likely scenarios are a combination of solutions involving vehicle mix, powertrain alternatives, optimizing electronic controls and intelligence, innovative weight reduction, fuel source options, and major infrastructure investments. The</p>						<p>revenue by 2020. Without appropriate R&amp;D to develop new products and update current products, Eaton would lose out on approximately \$250 million in annual revenue by 2020.</p>	<p>requirements. For example, Eaton's Vehicle business offers the world's most complete line-up of fuel-saving hybrid systems for commercial vehicle applications. In 2016, customers using the company's hybrid systems on delivery trucks, buses, refuse and utility vehicles and other commercial applications surpassed 2 billion miles of clean, reliable service and helped save more than 53 million gallons of fuel while reducing GHG emissions by &gt;235,000 metric tons (using EPA conversion factor) over the</p>	<p>Customers using the company's hybrid systems on delivery trucks, buses, refuse and utility vehicles and other commercial applications have collectively accumulated more than 2 billion miles of clean, reliable service and helped save more than 53 million gallons of fuel while reducing GHG emissions by &gt;470,000 metric tonnes (using EPA conversion factor) over the past 11 years. Eaton hybrid electric, plug-in hybrid electric and hybrid hydraulic power systems achieve up to a 37 percent improvement in</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>risk is that companies could begin investing in new products and processes to accommodate the new standards, but regulations are changed by a new administration and the investments are wasted. Also, regulations could become fragmented, with certain states imposing various levels of additional stringency, or at a global level, with large regional variations that raise overall costs to the industry. Finally, achieving CAFE standards could raise vehicle prices beyond affordability for some Americans, thereby affecting sales of products using Eaton components. For example, Eaton's TVS</p>							<p>past 11 years. Eaton hybrid electric, plug-in hybrid electric and hybrid hydraulic power systems achieve up to a 37 percent improvement in average fuel economy.</p>	<p>average fuel economy.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	superchargers are designed to improve vehicle fuel efficiency by enabling downsizing, down-speeding, and boost-on-demand. And our fuel emissions, advanced transmission, and engine control solutions provide innovative answers to government regulations for fuel efficiency and safety. However, consistent CAFE standards would also strengthen demand for these and other products and help minimize this risk.								

CC5.1b

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	The physical risks of increased storm and hurricane activity, as well as flooding and droughts, may place a temporary financial burden on Eaton facilities and supply chain to sustain operations and protect our employees and communities. For example, a series of blizzards in the southeast US shutdown transportation lines at Eaton's Roanoke VA warehouse facility. Shipping and receiving was delayed or shutdown for three days putting about \$1 million per day at risk in contracts. Climate change would increase these risks for Eaton and the company's 200+ facilities around the globe resulting higher costs and increased threats to	Inability to do business	3 to 6 years	Direct	About as likely as not	Medium	Estimated financial implications before taking action depend on the severity of an incident, but can approach \$10-\$15 million for significant damage to a manufacturing plant due to flooding or high wind velocity incidents.	Eaton conducts strategic planning at all of its facilities and associated businesses. The factors considered include potential environmental impacts, physical risks such as changing weather patterns, rising temperatures and other natural disasters, new regulations, waste minimization and many other factors. An outcome of these meetings is the development of local response plans designed to address catastrophic occurrences, including humanitarian demands of employees and communities. As a result, Eaton has enhanced its emergency response capabilities through the company's Enterprise Risk Management (ERM)	Costs associated with these actions are included in the annual budgets for the businesses and facilities, and represent <\$3 million per year.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	employee safety.							governance structure to deal with physical risks. This system includes an emergency response Hotline. A call to the Hotline engages the Corporate Emergency Response Team which can provide resources to help a facility deal with emergencies and assist in communications and decision-making. Other programs that support ERM include business continuity, travel and employee security, IT disaster recovery, and pandemic preparedness. For example, a blizzard in the southeast US shutdown transportation lines at Eaton's Roanoke VA warehouse facility. Shipping and receiving was delayed for three days putting up to \$1 million per day at risk in contracts. The ERM, along with facility	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								planning helped minimize the impact by ongoing communications with customers, rescheduling deliveries, negotiating terms and other activities.	

**CC5.1c**

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Increasing humanitarian demands	In the event of changing climate conditions, e.g. droughts, or other extreme weather events, Eaton could be called upon (and expected) to do more to address the increasing humanitarian demands, particularly if the	Increased operational cost	>6 years	Indirect (Client)	Unlikely	Low	Financial help for increasing humanitarian demands would come from the Eaton Charitable Trust contributions budget. In 2016, Eaton's budget was \$11.1 million. Eaton could redirect money from its traditional recipients to	Increase contributions budget to address additional humanitarian needs as they occur. Eaton conducts strategic planning at all of its facilities and associated businesses. The factors considered include potential environmental	Adding 10% to Eaton's contributions budget to address additional humanitarian needs would cost approx. \$1.1 million.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>extreme weather events are severe and widespread. These events could place increasing burdens on Eaton's charitable contributions budget as we seek to repair damages and help victims survive and return to normal lives. For example, after Hurricane Odile battered Mexico's Baja California peninsula, employees of Eaton's aerospace facility in Tijuana provided emergency supplies for storm victims. Hurricane Odile leveled cities, communities and resort areas – leaving many residents and about 15,000 vacationers stranded without water, food, electricity and</p>						<p>affected populations, or raise its budget to address growing humanitarian needs. Redirection of 10 percent of its budget would lead to \$1.1 million less to traditional recipients. Raising its budget by 10 percent would provide an additional \$1.1 million for humanitarian demands. If Eaton does nothing, the affected population could be deprived of an additional \$1.1 million in humanitarian assistance.</p>	<p>impacts, physical risks such as changing weather patterns, rising temperatures and other natural disasters, new regulations, waste minimization and many other factors. An outcome of these meetings is the development of local response plans designed to address catastrophic occurrences, including humanitarian demands of employees and communities. For example, after Hurricane Odile battered Mexico's Baja California peninsula, employees of Eaton's aerospace facility in Tijuana provided emergency supplies for storm victims. Hurricane Odile leveled cities, communities and</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>medical care. It was one of the most destructive storms in modern history to strike the peninsula. In the days following the storm, Eaton organized a supply drive and collected 500 kilograms (more than 1,100 pounds) of donated supplies from employees – including bottled water, canned food, rice, beans, cereal, powdered milk, toothpaste, soap, toilet paper and diapers. Also, to support humanitarian efforts, Eaton corporate contributions matched employee gifts of \$25 or more to the Mexican Red Cross. Climate change would increase these risks for Eaton by causing our</p>							<p>resort areas – leaving many residents and about 15,000 vacationers stranded without water, food, electricity and medical care. It was one of the most destructive storms in modern history to strike the peninsula. In the days following the storm, Eaton organized a supply drive and collected 500 kilograms (more than 1,100 pounds) of donated supplies from employees – including bottled water, canned food, rice, beans, cereal, powdered milk, toothpaste, soap, toilet paper and diapers. Also, to support humanitarian efforts, Eaton corporate contributions matched employee gifts of \$25 or more to the Mexican Red</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	contributions budget to grow beyond company parameters which are currently \$1.1 million.							Cross.	

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CC5.1d

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

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CC5.1e

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

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CC5.1f

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

**Further Information**

**Page: CC6. Climate Change Opportunities**

**CC6.1**

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

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

**CC6.1a**

**Please describe your inherent opportunities that are driven by changes in regulation**

<b>Opportunity driver</b>	<b>Description</b>	<b>Potential impact</b>	<b>Timeframe</b>	<b>Direct/Indirect</b>	<b>Likelihood</b>	<b>Magnitude of impact</b>	<b>Estimated financial implications</b>	<b>Management method</b>	<b>Cost of management</b>
Renewable energy regulation	After years of uncertainty about the survival of tax credits for renewable energy, legislation has been approved extending credits for wind	Increased demand for existing products/services	>6 years	Direct	Virtually certain	Medium-high	Eaton achieved \$45 million of year-over-year synergy profits in 2016 from our Cooper acquisition, and \$135 million of additional	Acquisition of Cooper Industries, along with new products and processes from our R&D efforts, and organic growth will combine to provide the	\$13.79 billion acquisition of Cooper, plus \$589 million in R&D investments in 2016.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>and solar power. Solar power companies can keep claiming federal tax credits at 30% of the price of a solar array. The credits will be good through 2019. After that, the credit will begin to drop, declining to 10% by 2022 where it will remain. These actions provide market certainty for Eaton, and offer the opportunity for the company's portfolio of wind and solar energy products. For example, Eaton's Microgrid Energy Systems help assure electrical energy surety independent of the utility grid availability or help provide</p>						<p>profits in 2015. This multi-year profit growth represents a powerful accelerator to the organic growth that emanates from our expanded set of global power management capabilities. We estimate that R&amp;D investments could help raise segment margins from 15% in 2016 to 17-18% in 2020. In 2016, a 3% increase in segment margins would have represented an increase in segment operating profit of about \$600 million.</p>	<p>power management products and solutions required to address this opportunity. For example, in 2016, our electrical distribution equipment and engineering services helped power more than 1,600 homes with five community solar installations in Colorado. And California's Redwood Solar Farm relies on our solar inverters, distribution equipment and services to power 9,200 homes, helping local utilities meet the California Renewables</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	demand/load management. To accomplish this, a combination of multiple generation sources, including generators, solar, wind and energy storage, can be integrated on a common grid structure with necessary loads seamlessly islanded from or paralleled with the main grid.							Portfolio standard of generating 33 percent of energy from renewable sources by 2020. By acquiring Cooper, we add to our capabilities of smooth conversion of renewable energy into clean electric power through inverters, power distribution transformers and other innovative products and services.	
Fuel/energy taxes and regulations	EPA's proposed 2017-2025 LD CAFÉ/GHG standards represent an aggressive target of 4-5% improvement per year from a baseline of	Increased demand for existing products/services	>6 years	Direct	Virtually certain	Medium	Eaton expects an additional \$250 million in annual revenue by 2020 from new products in our Vehicles Business that	Eaton invests in development of innovative products and solutions, along with improvements in existing technology	\$589 million spent on R&D in 2016.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>about 35 mpg (2016) for the national automotive fleet. This will challenge the OEM's in terms of commercializing the necessary technologies while balancing against consumer preferences in size, weight, safety, and performance features. Likely scenarios are a combination of solutions involving vehicle mix, powertrain alternatives, optimizing electronic controls and intelligence, innovative weight reduction, fuel source options, and major infrastructure investments. Eaton provides</p>						<p>help customers lower fuel consumption, improve efficiency and solve customers' need to meet regulations.</p>	<p>that help our customers meet their most demanding energy and emissions requirements. For example, our cylinder deactivation system is the most direct way to reduce emissions and improve fuel economy through the driving cycle. Eaton was an early leader in the research and development of onboard refueling vapor recovery (ORVR) systems, which reduce hydrocarbon emissions by about 95 percent during refueling. China—the</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>products to address our customer needs, including superchargers and other fuel-saving products for vehicles. Therefore, this regulation could increase demand for these relevant Eaton products. The Eaton Supercharger has been improving engine performance since 1985, beginning with the reknown M-Series. Five generations later, the TVS® (Twin Vortices Series®) was a revolutionary design that provides an incredible 12% efficiency improvement, which saves fuel and reduces</p>							<p>world's largest market for passenger and commercial vehicles—committed to implementing ORVR in early 2017 creating a new market for Eaton.</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	GHG emissions.								
Air pollution limits	<p>The US EPA issued final Carbon Pollution Standards for new, modified and reconstructed power plants, and proposed a federal plan to assist states in implementing the Clean Power Plan (CPP). When the rules were finalized, 28 states challenged CPP in court. If the rules stand -- or change minimally -- states and utilities will likely be given ample flexibility and time needed to achieve these pollution reductions, while maintaining a reliable and affordable supply of electricity for</p>	Increased demand for existing products/services	>6 years	Direct	Very likely	Medium-high	<p>We estimate that technology developments could help raise segment margins from 15% in 2016 to 17-18% in 2020. In 2016, a 3% increase in segment margins would have represented an increase in segment operating profit of about \$600 million.</p>	<p>Eaton invests in development of innovative products and solutions, along with improvements in existing technology that help our customers meet their most demanding energy and emissions requirements. The vast majority of our R&amp;D budget is allocated to power management solutions that reduce and manage energy use, improve fuel economy and reduce GHG emissions. For example, working hand-in-hand with</p>	\$589 million spent on R&D in 2016.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>rate payers and businesses. This will create new economic opportunities for Eaton, including products and services for plant retrofits to accommodate natural gas fuel; electrical power control systems for the efficient use of power and lower carbon emissions; wind and solar installations; and more. For example, Eaton's Microgrid Energy Systems help assure electrical energy surety independent of the utility grid availability or help provide demand/load management. To accomplish this, a combination of</p>							<p>Portland General Electric power company, we pioneered a solution that leverages first-of-its-kind lithium-ion battery storage technology. Eaton engineers devised a modification to enable bi-directional energy current operation. With customized Eaton Power Xpert inverters, the system can convert direct to alternating current and vice versa, maximizing harvested renewable energy resources efficiently and cost</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>multiple generation sources, including generators, solar, wind and energy storage, can be integrated on a common grid structure with necessary loads seamlessly islanded from or paralleled with the main grid.</p>							<p>effectively. Eaton's sophisticated control interface enables the storage system to perform in multiple modes. It intelligently coordinates the operation of the inverters and balances demand among the battery blocks. The facility can respond to both real-time and reactive power commands to achieve seamless power support and energy efficiency and carbon emissions reduction.</p>	

CC6.1b

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Changes in temperature extremes can lead to serious weather events such as tornadoes and hurricanes, or melting sea ice causing flooding in coastal areas. Eaton can offer customers comprehensive solutions for minimizing their own physical risks. For example, high atop a 6,288-foot mountain—home to some of the most dangerous and unpredictable weather in the world—the Mount Washington Observatory in New Hampshire conducts research and collects real-time	Increased demand for existing products/services	>6 years	Direct	Likely	Low-medium	We estimate that technology developments could help raise segment margins from 15% in 2016 to 17-18% in 2020. In 2016, a 3% increase in segment margins would have represented an increase in segment operating profit of about \$600 million.	To manage this opportunity, Eaton develops comprehensive solutions to customers for combating their physical risks. Our Electrical group is a leading provider of distribution and control solutions that increase energy efficiency and improve power quality, safety and reliability. Our PowerChain™ Management solutions offer a growing portfolio of “green” products and services, such as energy audits and real-time energy consumption monitoring. Eaton’s Uninterruptible	\$589 million spent on R&D in 2016, the vast majority for products and solutions that improve energy efficiency, reduce fuel consumption, and mitigate GHG emissions.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>data for the U.S. National Weather Service. Demanding uninterrupted power for critical 24/7 observations, this nonprofit educational institution installed our rugged 9355 Uninterruptible Power System (UPS) to support its entire IT infrastructure.</p>							<p>Power System (UPS) products, variable speed drives and lighting controls provide greater reliability, improved operational efficiencies and enhanced safety, making power outages from the physical risk of unstable weather patterns less of a threat. For example, high atop a 6,288-foot mountain—home to some of the most dangerous and unpredictable weather in the world—the Mount Washington Observatory in New Hampshire conducts research and collects real-time data for the U.S. National Weather Service. Demanding uninterrupted power for critical 24/7</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								observations, this nonprofit educational institution, in 2015, chose our rugged 9355 Uninterruptible Power System (UPS) to support its entire IT infrastructure.	

CC6.1c

Please describe your inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behavior	As regulation of emissions, energy efficiency and fuel standards begin to take hold, consumer behavior will favor companies that offer "green" products. Eaton	Increased demand for existing products/services	>6 years	Direct	Likely	Low-medium	Even considering headwinds that could constrain growth, Eaton's technology advancements will play a significant role in meeting Eaton's projected growth of segment margins from	To manage this opportunity, Eaton develops comprehensive solutions to customers for combating their physical risks. Our Electrical group is a leading provider of distribution and	\$589 million spent on R&D in 2016, the vast majority for products and solutions that improve energy efficiency, reduce fuel consumption, and mitigate

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>provides innovative products, services and technologies to conserve fuel, manage electric power, and reduce GHG emissions. For example, high atop a 6,288-foot mountain—home to some of the most dangerous and unpredictable weather in the world—the Mount Washington Observatory in New Hampshire conducts research and collects real-time data for the U.S. National Weather Service. Demanding uninterrupted power for critical 24/7 observations, this nonprofit educational</p>						<p>15% in 2016 to 17-18% in 2020. In 2016, a 3% increase in segment margins would have represented an increase in segment operating profit of about \$600 million.</p>	<p>control solutions that increase energy efficiency and improve power quality, safety and reliability. Our PowerChain™ Management solutions offer a growing portfolio of “green” products and services, such as energy audits and real-time energy consumption monitoring. For example, high atop a 6,288-foot mountain—home to some of the most dangerous and unpredictable weather in the world—the Mount Washington Observatory in New Hampshire conducts research and collects real-time data for the U.S. National Weather Service. Demanding uninterrupted</p>	<p>GHG emissions.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	institution chose installed our 9355 UPS to support its entire IT infrastructure.							power for critical 24/7 observations, this nonprofit educational institution chose, our 9355 UPS to support its entire IT infrastructure.	
Reputation	Worldwide public pressure, along with an increase in regulation of emissions, energy efficiency and fuel standards, reputations of companies offering sustainable products will trend positive. Eaton provides innovative products, services and technologies to conserve fuel, manage electrical power, and reduce GHG emissions. For example, our cylinder	Increased demand for existing products/services	>6 years	Direct	Likely	Low-medium	Achieving legislation and policies that encourage market-based incentives for technology to reduce emissions and improve fuel economy and energy efficiency will increase markets for Eaton's technology. For example, Eaton expects an additional \$250 million in annual revenue by 2020 from new products in our Vehicles Business that help customers lower fuel	To manage this opportunity, Eaton works with congressional staff and policy makers to encourage market-based incentives for technology development and deployment that will reduce emissions and improve fuel efficiency. For example, Eaton endorses the EPA's new Corporate Average Fuel Economy (CAFÉ) and GHG standards for automotive passenger vehicles which	Eaton reported \$860,000 in lobbying expenses in 2016.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>deactivation system is the most direct way to reduce emissions and improve fuel economy through the driving cycle. Eaton was an early leader in the research and development of onboard refueling vapor recovery (ORVR) systems, which reduce hydrocarbon emissions by about 95 percent during refueling. China—the world's largest market for passenger and commercial vehicles—committed to implement ORVR in early 2017, thereby opening up markets for</p>						<p>consumption, improve efficiency and solve customers' need to meet regulations.</p>	<p>mandate that vehicle fleets achieve an average of 54.5 mpg by 2025, thereby reducing fuel use and carbon emissions. Eaton is now meeting with the US EPA and other stakeholders on phase two of the CAFE and GHG rule for commercial trucks that will set standards for 2018 thru 2025. Our work related to testing, compliance and incentives drive adoption of fuel efficient technologies through aggressive GHG and CAFÉ standards. In 2016, we worked with stakeholders and the agencies to identify technologies that will help OEM's</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Eaton's sustainable products which will provide new opportunities add to Eaton's reputation as a sustainable company.							meet the standards with improved performance in the next phase of rulemaking.	

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**CC6.1d**

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

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**CC6.1e**

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

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**CC6.1f**

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

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**Further Information**

**Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading**

**Page: CC7. Emissions Methodology**

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**CC7.1**

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

<b>Scope</b>	<b>Base year</b>	<b>Base year emissions (metric tonnes CO2e)</b>
Scope 1	Wed 01 Oct 2014 - Wed 30 Sep 2015	169573
Scope 2 (location-based)	Wed 01 Oct 2014 - Wed 30 Sep 2015	840770
Scope 2 (market-based)		

---

**CC7.2**

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

**Please select the published methodologies that you use**

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

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**CC7.2a**

**If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

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**CC7.3**

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

<b>Gas</b>	<b>Reference</b>
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)

---

**CC7.4**

**Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page**

Fuel/Material/Energy	Emission Factor	Unit	Reference
Natural gas	181.226	kg CO2e per MWh	The Climate Registry - General Reporting Protocol USA Industrial Sector 2015
Electricity	459	kg CO2e per MWh	Please see attached excel sheet

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### Further Information

#### Attachments

[https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/170208\\_Eaton\\_EmissionsFactors\\_forCDP.xlsx](https://www.cdp.net/sites/2017/94/5194/Climate%20Change%202017/Shared%20Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/170208_Eaton_EmissionsFactors_forCDP.xlsx)

**Page: CC8. Emissions Data - (1 Oct 2015 - 30 Sep 2016)**

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#### CC8.1

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

Financial control

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#### CC8.2

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

152714

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**CC8.3**

**Please describe your approach to reporting Scope 2 emissions**

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure	

---

**CC8.3a**

**Please provide your gross global Scope 2 emissions figures in metric tonnes CO<sub>2</sub>e**

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
806165		

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**CC8.4**

**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

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**CC8.4a**

Please 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	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Sales and administrative offices	Emissions are not relevant	Emissions are not relevant		Eaton excludes its sales and administrative offices from its Scope 2 emissions calculations. Sales and administrative offices account for about 200 of Eaton's 400 locations. The average usage from a representative sample of 40 excluded sites was multiplied by the average emission factor for all 200 excluded sites to calculate a percentage estimate of the total Scope 2 emissions unaccounted for in current calculations. The excluded sites, 50% of Eaton's locations, account for less than 10% of its total Scope 2 emissions. Eaton will continue to only account for its manufacturing locations when calculating Scope 2 emissions, as they have a footprint more than 9 times the size of sales offices.
Fuels other than natural gas	Emissions are not relevant	No emissions from this source		Eaton excludes fuels other than natural gas from its Scope 1 emissions calculations. On a survey asking sites to report fuel oil, bunker oil, coal, and propane use, 55% of sites reported that they do not use these fuels. After applying the average annual usage from sites that reported it to the sites that were unsure or had no response, fuel oil and propane accounted for less than 5% of total reported and calculated Scope 1 emissions, and are therefore irrelevant. No sites reported using bunker oil or coal.

**CC8.5**

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

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 5% but less than or equal to 10%	Data Gaps Assumptions Extrapolation	Data received from sources outside of the standard process, like natural gas bills from India.
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Data Gaps Assumptions Extrapolation	Data received from sources outside of the standard process, like electric bills from joint ventures in India.
Scope 2 (market-based)			

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**CC8.6**

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

Third party verification or assurance process in place

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**CC8.6a**

**Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements**

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC8.6a/Eaton FY2016 Scope1_2 GHG Verification Statement_CDP Format_rev2.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC8.6a/Eaton FY2016 Scope1_2 GHG Verification Statement_CDP Format_rev2.pdf</a>	Page 1-4	ISO14064-3	100

#### CC8.6b

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

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

#### CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

#### CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2017/94/5194/Climate%20Change%202017/Shared%20Documents/Attachments/CC8.7a/Eaton%20FY2016%20Scope1_2%20GHG%20Verification%20Statement_CDP%20Format_rev2.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC8.7a/Eaton FY2016 Scope1_2 GHG Verification Statement_CDP Format_rev2.pdf</a>	Page 1-4	ISO14064-3	100

#### CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year change in emissions (Scope 1 and 2)	See page 2 of verification report

#### CC8.9

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

No

#### CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

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**Further Information**

**Page: CC9. Scope 1 Emissions Breakdown - (1 Oct 2015 - 30 Sep 2016)**

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**CC9.1**

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

Yes

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**CC9.1a**

**Please break down your total gross global Scope 1 emissions by country/region**

Country/Region	Scope 1 metric tonnes CO2e
North America	113560
South America	4250
Europe, Middle East and Africa (EMEA)	34204
Asia Pacific (or JAPA)	700

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**CC9.2**

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

By business division

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**CC9.2a**

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

<b>Business division</b>	<b>Scope 1 emissions (metric tonnes CO2e)</b>
Electrical Americas	55020
Electrical EMEA	6465
Electrical APAC	242
Hydraulics	37756
Aerospace	11942
Vehicle	41289

---

**CC9.2b**

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

<b>Facility</b>	<b>Scope 1 emissions (metric tonnes CO2e)</b>	<b>Latitude</b>	<b>Longitude</b>
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**CC9.2c**

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
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CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
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**Further Information**

**Page: CC10. Scope 2 Emissions Breakdown - (1 Oct 2015 - 30 Sep 2016)**

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CC10.1

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

Yes

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CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market- based approach (MWh)
North America	492982		905134	
South America	20746		129344	
Europe, Middle East and Africa (EMEA)	168753		346638	
Asia Pacific (or JAPA)	123684		185591	

#### CC10.2

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

By business division

#### CC10.2a

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

Business division	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
Electrical Americas	218413	

<b>Business division</b>	<b>Scope 2, location-based (metric tonnes CO2e)</b>	<b>Scope 2, market-based (metric tonnes CO2e)</b>
Electrical EMEA	32210	
Electrical APAC	44082	
Hydraulics	161615	
Aerospace	47665	
Vehicle	302180	

---

**CC10.2b**

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

<b>Facility</b>	<b>Scope 2, location-based (metric tonnes CO2e)</b>	<b>Scope 2, market-based (metric tonnes CO2e)</b>

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**CC10.2c**

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

<b>Activity</b>	<b>Scope 2, location-based (metric tonnes CO2e)</b>	<b>Scope 2, market-based (metric tonnes CO2e)</b>

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**Further Information**

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CC11.1

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

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

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CC11.2

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

Energy type	MWh
Heat	0
Steam	0
Cooling	0

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CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

842673

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CC11.3a

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

Fuels	MWh
Natural gas	842673

**CC11.4**

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor			

**CC11.5**

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
1566707	1566707	0	0	0	

**Further Information**

**Page: CC12. Emissions Performance**

**CC12.1**

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

Decreased

**CC12.1a**

**Please 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**

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0.3	Decrease	Eaton's emissions reduction activities in 2016 (re-lighting, HVAC upgrades, compressor optimization, etc.) have resulted in S1 & S2 emissions reductions of 2920 mtCO <sub>2</sub> e. Our total global emissions in 2015 were 1018798 mtCO <sub>2</sub> e. Therefore, we arrived at 0.3% reduction through: $2920 \text{ mtCO}_2\text{e} / 1018798 \text{ mtCO}_2\text{e} * 100$ .
Divestment			
Acquisitions			
Mergers			
Change in output	4	Decrease	In 2016, Eaton's sales, adjusted for foreign exchange rates, were down by 4 percent compared to 2015, resulting in decreased factory activity and energy use. Our global S1 & S2 emissions in 2015 were 1018798 mtCO <sub>2</sub> e, and our decrease due to change in output in 2016 was 40414 mtCO <sub>2</sub> e. We arrived at the 4% decrease through: $40414 \text{ mtCO}_2\text{e} / 1018798 \text{ mtCO}_2\text{e} * 100$ .
Change in methodology			
Change in boundary			
Change in physical operating			

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
conditions			
Unidentified	0.8	Decrease	Overall, Eaton's total emissions decreased by 5.1 percent from 2015 to 2016, or 51464 mtCO <sub>2</sub> e. $51464\text{mtCO}_2\text{e} / 1018798 \text{ mtCO}_2\text{e} * 100 = 5.1\%$ We can account for a total decrease of 4.3% through emissions reduction activities and changes in output. This leaves an unaccounted-for 0.8% decrease in emissions. This decrease could be due to a more favorable electricity mix, reducing Scope 1 emissions more than Scope 2 emissions, or rounding errors.
Other			

#### CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

#### CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO<sub>2</sub>e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
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Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
.0000486	metric tonnes CO2e	19700000000	Location-based	0.2	Increase	In 2016, Eaton's revenue, including foreign exchange rates, was down by 5.3 percent compared to 2015, resulting in the change in CO2e per unit currency total revenue.

**CC12.3**

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
10	metric tonnes CO2e	full time equivalent (FTE) employee	95480	Location-based	3.4	Decrease	In 2016, 96 projects costing \$1.79 million helped reduce GHG emissions by 4106 metric tonnes. These emissions reductions projects caused our manufacturing processes became more efficient per employee.

**Further Information**

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**CC13.1**

**Do you participate in any emissions trading schemes?**

No, and we do not currently anticipate doing so in the next 2 years

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**CC13.1a**

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

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

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**CC13.1b**

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

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**CC13.2**

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

No

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**CC13.2a**

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance
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**Further Information**

**Page: CC14. Scope 3 Emissions**

**CC14.1**

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

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	6300000	To calculate an average emission factor for purchased goods, Eaton utilizes the CDP Reporter Services Supply Chain Analytics portal. Indexed emissions data is sourced from CDP responses of our purchased goods supply chain partners, and corrected to accurately reflect emissions per unit revenue. These emission factors are multiplied by our annual spend on each supplier to determine our	2.00%	In 2016, Eaton was able to use suppliers' upstream scope 3 data reliably for the first time in our emissions factor calculations. As a result, the percentage of emissions calculated using data obtained from suppliers decreased, while our emissions estimate increased.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			purchased goods emissions from this subset of suppliers, and then extrapolated by total annual purchased goods spend to represent the whole corporation. Intercompany sales are excluded so as to avoid double counting between scopes.		
Capital goods	Not relevant, calculated	83000	To calculate an average emission factor for capital goods, Eaton utilizes the CDP Reporter Services Supply Chain Analytics portal. Indexed emissions data is sourced from CDP responses of our capital goods supply chain partners, and corrected to accurately reflect emissions per unit revenue. These emission factors are multiplied by our annual spend on each supplier to determine our capital goods emissions from this subset of suppliers, and then extrapolated by total annual capital goods spend to represent the whole corporation. Intercompany sales are excluded so as to avoid double counting between scopes.	24.00%	Calculated capital goods emissions represent less than 1% of our total emissions impact and are not relevant. In 2016, Eaton was able to use suppliers' upstream scope 3 data reliably for the first time in our emissions factor calculations. As a result, the percentage of emissions calculated using data obtained from suppliers decreased, while our emissions estimate increased.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, calculated	280000	Fuel- and energy-related activities (including upstream emissions and transportation and distribution losses) are estimated using online lifecycle databases (% breakdown by life cycle phase) and Eaton's scope 1 and scope 2 data (CO2e emissions). Online databases estimate upstream emissions for electricity use as 6% of total emissions, and upstream emissions for natural gas use as 60% of total emissions. Category 3 emissions are extrapolated from		Calculated upstream fuel emissions represent less than 1% of our total emissions impact and are not relevant.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			Eaton's Scope 1 and Scope 2 calculations using these percentages.		
Upstream transportation and distribution	Not relevant, calculated	120000	Transportation and distribution emissions data is received from FedEx, who manages Eaton's logistics. Assumptions based on weight, volume, distance, and mode of shipment are applied to mass and distance information from truck, air, and small package shipments. These modes combined account for 97% of all shipments. Other modes comprising 3% of shipments are not included. Upstream and downstream shipments are categorized based on payment method. FedEx provides data from the North America region, which accounts for about 65% of Eaton's total sales. Emissions are therefore extrapolated by 35% to account for excluded global shipments. It is assumed that approximately 15% of shipments are paid by customers or suppliers and are not included in the dataset, so emissions are extrapolated to include these as well.	57.00%	Calculated upstream T&D emissions represent less than 1% of our total emissions impact and are not relevant.
Waste generated in operations	Not relevant, calculated	9500	Eaton uses the WARM model to estimate emissions from waste data on landfilled or incinerated grinding swarf, metal scrap, plastic scrap, rubber scrap, and general trash captured in its EHS management system. The majority of Eaton's waste is recycled, but emissions due to recycling are not included in the estimate as the WARM model calculates recycling impact as negative. Only operations that had an impact		Calculated waste emissions represent less than 1% of our total emissions impact and are not relevant. In 2016, Eaton used an updated version of the WARM model which uses lower emission factors, significantly reducing our calculated waste emissions.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			greater than 0 tons of CO2eq were considered. Wastewater emissions are not included in the emissions estimate as Eaton is an industrial manufacturing company, and wastewater is only material for industries with a high concentration of CH4 in their wastewater, such as those in the pulp and paper, food and beverage, or organic chemical production industries. Emissions from the transportation of waste to disposal facilities are included in the WARM model based on national average transportation distances.		
Business travel	Not relevant, calculated	53000	For air travel, Eaton receives a detailed emission report from BCD, our travel coordinator. Emissions are extrapolated to include countries that do not use BCD. For all other business travel calculations, Eaton uses a variety of publicly available data to estimate emission factors for economic data captured through receipts submitted through Eaton's business travel software.	45.00%	Calculated business travel emissions represent less than 1% of our total emissions impact and are not relevant.
Employee commuting	Not relevant, calculated	160000	Eaton currently estimates its employee commuting data based on averages of published commute modes and distances by region to calculate an average carbon footprint for an average Eaton employee. This footprint is then multiplied by the number of employees at Eaton and the number of days in a working year to calculate Eaton's annual employee commuting emissions contribution.		Calculated employee commute emissions represent less than 1% of our total emissions impact and are not relevant.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Upstream leased assets	Not relevant, calculated	53000	Eaton receives an emission report from LeasePlan, who coordinates fleet cars. LeasePlan covers approximately 70% of Eaton's fleet cars, so emissions are extrapolated to include the global fleet.	70.00%	Calculated upstream leased asset emissions represent less than 1% of our total emissions impact and are not relevant.
Downstream transportation and distribution	Not relevant, calculated	180000	Transportation and distribution emissions data is received from FedEx, who manages Eaton's logistics. Assumptions based on weight, volume, distance, and mode of shipment are applied to mass and distance information from truck, air, and small package shipments. These modes combined account for 97% of all shipments. Other modes comprising 3% of shipments are not included. Upstream and downstream shipments are categorized based on payment method. FedEx provides data from the North America region, which accounts for about 65% of Eaton's total sales. Emissions are therefore extrapolated by 35% to account for excluded global shipments. It is assumed that approximately 15% of shipments are paid by customers or suppliers and are not included in the dataset, so emissions are extrapolated to include these as well.	57.00%	Calculated downstream T&D emissions represent less than 1% of our total emissions impact and are not relevant.
Processing of sold products	Not relevant, explanation provided				Emissions related to the processing of sold products are irrelevant. Eaton manufactures highly engineered products. Customers integrate our products and systems into their platforms or sell them directly to consumers. We do not produce products that act as raw

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					materials that require further processing.
Use of sold products	Relevant, calculated	60000000	Using the data from LCAs Eaton has completed, the average emissions contribution from use of Eaton products is about 87%, while manufacturing and material use account for 11.5%. Eaton's Scope 1 and 2 emissions, added to the calculated Scope 3 purchased goods, capital goods, and category 3 emissions, are extrapolated from 11.5% to 87% to estimate annual use impact.		In 2016, Eaton was able to use suppliers' upstream scope 3 data reliably for the first time in our emissions factor calculations. As a result, our emissions estimate significantly increased due to the way we extrapolate from known data.
End of life treatment of sold products	Not relevant, calculated	330000	Using the data from LCAs Eaton has completed, the average emissions contribution from disposal of Eaton products is about 0.5%, while manufacturing and material use account for 11.5%. Eaton's Scope 1 and 2 emissions, added to the calculated Scope 3 purchased goods, capital goods, and category 3 emissions, are extrapolated from 11.5% to 0.5% to estimate annual end of life emissions.		Calculated EOL emissions represent less than 1% of our total emissions impact and are not relevant.
Downstream leased assets	Not relevant, explanation provided				Emissions related to downstream leased assets are irrelevant. Eaton Corporation does not lease company-owned assets to customers.
Franchises	Not relevant, explanation provided				Emissions related to franchises are irrelevant. Eaton Corporation manufactures highly engineered products. We sell these products directly to customers without the use of a franchised network.
Investments	Not relevant, explanation				Emissions related to investments are irrelevant. This category is designed primarily

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				for private financial institutions (e.g., commercial banks), but is also relevant to public financial institutions (e.g., multilateral development banks, export credit agencies) and other entities with investments not included in scope 1 and scope 2. As a manufacturer of highly engineered products, Eaton Corporation does not meet these criteria and therefore, this category does not apply.
Other (upstream)					
Other (downstream)					

**CC14.2**

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

Third party verification or assurance process in place

**CC14.2a**

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	<a href="https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC14.2a/Eaton 2016 Scope 3 GHG Verification Statement_CDP Format_final.pdf">https://www.cdp.net/sites/2017/94/5194/Climate Change 2017/Shared Documents/Attachments/CC14.2a/Eaton 2016 Scope 3 GHG Verification Statement_CDP Format_final.pdf</a>	Pages 1-3	ISO14064-3	100

### CC14.3

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

Yes

### CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Emissions reduction activities	10	Decrease	Eaton has achieved a 10% reduction over last year's emissions due to a reduction in Eaton's own Scope 1 and Scope 2 emissions, reflecting in part the slowdown of the global economy, as well as Eaton's internal footprint reduction activities.
Upstream leased assets	Emissions	3	Decrease	Eaton has achieved a 3% reduction over last year's emissions due to a reduction

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
	reduction activities			in fleet travel reflecting in part the slowdown of the global economy as well as the use of more environmentally friendly vehicles.

**CC14.4**

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

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

**CC14.4a**

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

Eaton Corporation is committed to improving our environmental footprint – not only around our own emissions, energy and water consumption but also by helping our suppliers reduce theirs. Method of engagement: All Eaton suppliers are engaged and required, through Eaton’s Supplier Code of Conduct and relevant Terms and Conditions, to minimize environmental pollution and make continuous improvements to reduce or eliminate solid waste, wastewater and air emissions, including greenhouse gases, by implementing appropriate conservation measures in their production, maintenance, and facility processes. In addition in 2016 we asked our most strategic suppliers to join us in our sustainability efforts by working with our partner CDP and completing the Supplier Questionnaire. Prioritizing engagement: Suppliers are prioritized and selected based on a variety of risk-based criteria including top spend and carbon emissions intensity of supplied products or operations, among others. In 2014, we began to expand our requests to include more suppliers from the metals industry. The targeted suppliers are strategic to our operations representing nearly 20% of Eaton’s total upstream spend on goods and services. Eaton engaged GZA GeoEnvironmental as an additional resource to assist our suppliers in responding to the questionnaire offering training and one on one consultation. Measures of Success: Our success was measured by the number of respondents, performance of individual suppliers against CDP and Eaton criteria (including year over year performance improvement criteria), and the quality of information submitted. The CDP supply chain results showed Eaton as a leading company in both number of suppliers asked and number responding. Eaton uses the supplier reported climate change qualitative and quantitative data in a variety of ways to develop an improved understanding of our footprint, as well as monitoring climate change-related risks and opportunities within our supply chain. Additionally, certain of the supplier provided emission data is used as inputs in Eaton’s calculation of relevant scope 3 emissions categories.

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**CC14.4b**

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

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
Active engagement	5000	100%	All 70,000 Eaton suppliers are engaged and required, through Eaton's Supplier Code of Conduct and relevant Terms and Conditions, to minimize environmental pollution and make continuous improvements to reduce or eliminate solid waste, wastewater and air emissions, including greenhouse gases, by implementing appropriate conservation measures in their production, maintenance, and facility processes. As a component of our supplier engagement methods, Eaton directly engaged 152 strategic suppliers representing 17% of total spend via the CDP Supply Chain program. Certain of the suppliers provided emission data is used as inputs in Eaton's calculation of relevant scope 3 emissions categories. CDP submission guidelines only allow a supplier number of between 0 and 5000, but our supplier engagement touches 70,000+ direct and indirect suppliers.

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**CC14.4c**

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

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**Further Information**

**Module: Sign Off**

**Page: CC15. Sign Off**

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**CC15.1**

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Craig Arnold	Chairman and Chief Executive Officer	Chief Executive Officer (CEO)

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**Further Information**

CDP