Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service diesel and natural gas engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana, (USA) Cummins currently employs approximately 55,000 people worldwide and serves customers in approximately 190 countries and territories through a network of approximately 600 company-owned and independent distributor locations and approximately 7,200 dealer locations. Cummins earned $1.4 billion on sales of $19.1 billion in 2015. Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at www.twitter.com/cummins and on YouTube at www.youtube.com/cumminsinc.

For reporting purposes to CDP, Cummins uses the following definition for its reporting boundary: all consolidated operations and joint ventures subscribing to Cummins Environment Management system.

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 Jan 2015 - Thu 31 Dec 2015

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
Australia
Brazil
China
India
Mexico
South Africa
United Kingdom
Rest of world

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($)

CC0.6

Modules
As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@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. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

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

CC1.1a

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

The Safety, Environment and Technology Committee of the Cummins Board of Directors. This committee met four times in 2015. The Committee advises senior leaders and the technical leadership of Cummins regarding: Environmental and technological strategies including climate change, compliance programs and major

projects as they relate to the Company and its products; public policy developments, strategies and positions taken by the Company with respect to safety, environmental and technological matters that significantly impact the Company or its products; progress of strategic environmental programs and policies.

CC1.2

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

Yes

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
Executive officer	Recognition (non-monetary)	Emissions reduction target Energy reduction target Efficiency target	Recognition for meeting goals and targets or competitions comes in the form of business unit recognition, recognition by the Board of Directors as well as the CEO.
Corporate executive team	Recognition (non-monetary)	Emissions reduction target Energy reduction target Efficiency target	Recognition for meeting goals and targets or competitions comes in the form of business unit recognition, recognition by the Board of Directors as well as the CEO.
Business unit managers	Monetary reward	Emissions reduction target Energy reduction target Efficiency target	A key measure in Cummins' Global Environmental Sustainability Plan is a commitment to transparency and accountability. Environmental goals are now incorporated into the Quarterly Scorecard for the Cummins Leadership Team's review. The scorecard shows progress toward the facilities and operations waste, water, energy, and greenhouse gas goals, products in use goal, and logistics goal. In each of these areas, the scorecard will show progress on the both enterprise-wide goals as well as the progress toward the goal apportioned by each business unit and some area business organizations (regional or

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			country focused.) Progress toward goal achievement is part of an employee's work plan for the year and can result in monetary award through merit increases and meeting the company's ROANA target, which results in a profit sharing bonus for all employees.
Energy managers	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target	A key measure in Cummins' Global Environmental Sustainability Plan is a commitment to transparency and accountability. Environmental goals are now incorporated into the Quarterly Scorecard for the Cummins Leadership Team's review. The scorecard shows progress toward the facilities and operations waste, water, energy, and greenhouse gas goals, products in use goal, and logistics goal. In each of these areas, the scorecard will show progress on the both enterprise-wide goals as well as the progress toward the goal apportioned by each business unit and some area business organizations (regional or country focused.) Progress toward goal achievement is part of an employee's work plan for the year and can result in monetary award through merit increases and meeting the company's ROANA target, which results in a profit sharing bonus for all employees.
Environment/Sustainability managers	Monetary reward	Behaviour change related indicator	Environment and sustainability managers have meeting sustainability goals based on changed behavior as part of their individual work plans. Achieving these work plans as part of the annual performance evaluation process determines what level of merit increase these employees receive. This increase can vary between 1-5 percent of base pay. Variable compensation for most employees is tied to return on average net assets targets, and the company's profitability based on sales and customer satisfaction, a function of how well products perform (including fuel efficiency and in use emissions) in part of that calculation.
Facility managers	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target Behaviour change related indicator	A key measure in Cummins' Global Environmental Sustainability Plan is a commitment to transparency and accountability. Environmental goals are now incorporated into the Quarterly Scorecard for the Cummins Leadership Team's review. The scorecard shows progress toward the facilities and operations waste, water, energy, and greenhouse gas goals, products in use goal, and logistics goal. In each of these areas, the scorecard will show progress on the both enterprise-wide goals as well as the progress toward the goal apportioned by each business unit and some area business organizations (regional or country focused.) Progress toward goal achievement is part of an employee's work plan for the year and can result in monetary award through merit increases and meeting the company's ROANA target, which results in a profit sharing bonus for all employees.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Process operation managers	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target Behaviour change related indicator	A key measure in Cummins' Global Environmental Sustainability Plan is a commitment to transparency and accountability. Environmental goals are now incorporated into the Quarterly Scorecard for the Cummins Leadership Team's review. The scorecard shows progress toward the facilities and operations waste, water, energy, and greenhouse gas goals, products in use goal, and logistics goal. In each of these areas, the scorecard will show progress on the both enterprise-wide goals as well as the progress toward the goal apportioned by each business unit and some area business organizations (regional or country focused.) Progress toward goal achievement is part of an employee's work plan for the year and can result in monetary award through merit increases and meeting the company's ROANA target, which results in a profit sharing bonus for all employees.
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behaviour change related indicator	The top 18 winners from the Cummins Environmental Challenge, a community focused project based challenge, receive $10,000 to donate to the community group of their choice. The projects are also featured prominently on the Company's intranet site as well as in the annual sustainability report.
Environment/Sustainability managers	Recognition (non-monetary)	Emissions reduction project Energy reduction project Efficiency project Behaviour change related indicator	The top winners of the Chairman's Environmental awards, an internal facility based awards program, are recognized throughout the company; the top 4 projects are featured as part of an integrated awards ceremony attended by senior executive management. The projects are also featured prominently on the Company's intranet site as well as in the annual sustainability report.
All employees	Recognition (non-monetary)	Behaviour change related indicator	Cummins holds an annual June Environmental Month, a celebration of the Company's environmental sustainability plan and its water, waste and energy goals. Employees may share their activities and be recognized on the intranet community site as well as have their projects and photos shared in internal and external communication forums.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Chief Executive Officer (CEO)	Recognition (non-monetary)	Emissions reduction target Energy reduction target Behaviour change related indicator	The CEO often accepts the external recognition that Cummins receives. For example, the CEO was engaged when in 2014. Cummins received the international Robert W. Campbell Award that recognize organizations that achieve excellence through the integration of environmental, health and safety management into business operations.

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

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	All areas in which Cummins has operations	> 6 years	Climate change actions are presented to both the full Board of Directors as well as committees to the Board.

CC2.1b

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

At a company level, the Enterprise Risk Management (ERM) group, which reports to the Vice President of Corporate Strategy, maintains a risk map to identify all potential risks (and to an extent, potential opportunities) the company faces, including strategic, operational, compliance and financial risks. The risk map is updated based on input from senior leadership, Cummins' Board of Directors and others in the organization. The risks identified by senior leadership and the Board of Directors are evaluated based on their likelihood and impact. The risks are also being assessed based on Cummins' capability to manage the risks. Certain risks identified are further explored through the use of strategy projects or Six Sigma projects, with findings presented back to the specific business. Cummins' top risks are presented at each meeting of the Board of Directors; periodically a deep dive into specific risks is presented to the Board. In addition, once a year a state of Enterprise Risk Management update is provided to the Board of Directors.

Strategic issues are identified either at the business unit level (each business unit has its own strategy leaders) and are elevated and studied in the growth office. Many of these are related to climate change – fuel economy, alternative fuels and new technology.

At an asset level, the Enterprise Risk Management group is responsible for working with each of our sites to develop business continuity plans, nearly 500 in total. The business continuity plans address potential risks each facility faces, including operational and environmental risks. The plans identify the appropriate preparedness opportunities, contingency plans, and recovery plans for each facility's top risks. The business continuity plans are updated annually, and facilities are expected to test their preparedness based on a potential disaster scenario at least once year. The results are reported to senior corporate and business unit leadership.

CC2.1c

How do you prioritize the risks and opportunities identified?

Cummins prioritizes risks and opportunities by using a variety of tools and techniques for enterprise risk management. As we analyze our comprehensive enterprise risks, we are using consistent criteria to measure the impact of these risks. The criteria include a broad variety of impacts, including among others, financial,

environmental, safety, reputation, and strategic impacts. We also are measuring the likelihood of each risk's occurrence consistently. In addition, we now are evaluating each risk using common criteria to assess our capability to manage each risk.

The Action Committee for Environmental Sustainability (ACES) also assesses risk related to climate change. This group takes a very structured and results-oriented approach to our 10 environmental sustainability principles developed to meet the challenges of climate change (in addition to water and waste management) going forward - and part of the approach includes discussion and analysis about climate change risk and opportunities at its monthly meetings as well as annual update to the Chairman and CEO.

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

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

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

i) The Action Committee for Environmental Sustainability (ACES), formed in 2012, integrates climate change actions into overall business strategy. The group is the voice and catalyst for environmental action beyond compliance in the company and provides tools, resources and for employees go further and faster in reaching environmental goals. The corporate ACES team has a global focus, involves all businesses and all functions and its structure of stakeholder areas is replicated all or in part in each of the four Company business units. The individual stakeholder and goal owner areas of ACES ensure that all aspects of the environment and relevant areas of the business are included and data is collected and reported that inform decision making and goal setting. A major outcome of the working group

is that in June 2014, Cummins announced that after several years of study and analysis, it had adopted a comprehensive environmental sustainability plan.
ii) As the concept of environmental sustainability matured at the company, the business strategy has been influenced by a broadened and even more comprehensive view of climate change. Consequently, leaders in 2015 initiated “Envolve Cummins,” a comprehensive way to view and prioritize actions to address the company’s biggest environmental opportunities.

iii) Envolve Cummins is the comprehensive lens through which Cummins views environmental sustainability, from design to manufacture to end of life. Our environmental sustainability plan is the way we carry out our priorities and goals and initiatives in our action areas. Envolve Cummins’ priorities for sustainable consumption and production focus on three key considerations: reducing the company’s carbon footprint; using fewer natural resources; and partnering to solve complex problems.

iv) In the short term, we have established strategies around the first two considerations. GHG emissions from Cummins products in use are the company’s largest environmental impact and represent an estimated 99 percent of Cummins’ greenhouse gas footprint due to fossil fuel use, which emits carbon dioxide (CO2), a key contributor to climate change. Cummins’ biggest opportunity to expand its product stewardship beyond the upfront design is in working with customers to improve the efficiency of its products in use. In May 2015, the Company announced two new environmental sustainability goals to reduce its carbon footprint; one for its products in-use and another for the logistics of the Company's managed freight. Cummins has raised the bar by pledging by 2020 to reach an annual reduction of 3.5 million metric tonnes of carbon dioxide (CO2), which equates to 350 million gallons of fuel. By the end of 2020, the Company expects to reach 20 percent of its customers, cumulatively saving them 1.6 billion gallons of fuel, $6 billon and more than 15 million metric tonnes of CO2. This equates to taking 3.2 million passenger vehicles off the road. In 2015 alone, the Company's fuel efficiency work to reduce CO2 emissions from products in-use was more than to the CO2 footprint of Cummins global facilities. In addition to products in-use fuel efficiency, Cummins is also pledging to use the most efficient methods to move goods across the Cummins network to reduce CO2 per kilogram of goods moved by 10 percent by 2020. This will save the company $40-64 million per year.. Cummins’ remanufacturing requires far less energy and natural resources to remanufacture products to extend life than to build new products. Remanufacturing maximizes benefits for customers and the environment. Cummins products are designed with this in mind, enabling them to have a long, and increasingly fuel efficient, life.

Another important way to reduce our carbon footprint was to set specific goals for its own facilities. These goals allow Cummins to take swift action to mitigate near-term environmental impacts while setting the Company on a path for incrementally more aggressive action in the long-term. Those goals as announced in 2014 are to:

- Reduce energy use and GHG emissions by 25 percent and 27 percent, respectively, compared to a 2005 baseline and adjusted by sales, by 2015. These goals were not only met but exceeded in 2015. Cummins has a network of business unit energy efficiency leaders that meet as a team as well as 500 trained Energy Champions. Our energy efficiency efforts, while a smaller portion of Cummins’ CO2 footprint, save the Company approximately $40 million per year

v) Part of our long-term strategy is to reduce the use of natural resources by using less, using better and using again. This goes beyond the company’s facilities, although certainly conservation is important there and Cummins has goals driving action. This new way of thinking at Cummins encompasses the entire product lifecycle, incorporating design tools, advanced manufacturing concepts and material science for the efficient use of materials and fuels and increased opportunities for remanufacturing and reuse. The sustainability world calls it circular material flow – Cummins calls it good for business and good responsible citizenship. Packaging leaders at Cummins continue to focus on reusable and returnable packaging to minimize natural resource use and reduce material sent to landfills.
We also have specific facility goals to -
- Reduce direct water use 33 percent by 2020, adjusted by hours worked and compared to a 2010 baseline. In addition, achieving “water neutrality” at 15 water-scarce sites by off-setting water use with community conservation or by other techniques. Cummins met the direct water use goal five years early in 2015.
- Increase Cummins’ recycling rate from 89 percent to 95 percent by 2020 and achieving “zero disposal” status at 30 major sites where all waste is recycled in a useful manner

vi) The company’s environmental actions give us a strategic advantage in several ways. Countless market research studies tell us that fuel efficiency is one of the most significant factors when a customer makes a purchase decision. Through our global Competitive Loyalty Study, we know that customers who are identified as company “promoters” spend on average 25 percent more of their budget with Cummins than those not as satisfied do because of attributes such as after-sale

service, product quality and performance. Cummins concludes that delivering on fuel efficiency will drive customer loyalty and uphold the brand promise of dependability. Environmental action and brand recognition contributes to meaningful work, a key employee engagement metric as well as to talent attraction and retention.

CC2.2b

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

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

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

An internal price of carbon is used when evaluating funding of energy efficiency projects. The price used is market-based, generally the price of carbon on a current public market exchange. Cummins is still at the stage of its energy efficiency projects where the price of carbon is usually not a determining factor in whether a project is funded. There are instances, however, when a project may not have a high return on investment or meet other financial hurdles but does avoid a significant amount of GHGs, so project may then get funded in that way.

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
Clean energy generation	Support	Cummins is building coalitions among various stakeholders, working with customers on solutions using clean burning energy and waste to energy and renewable energy and educating policymakers.	Cummins government relations department represents Cummins solutions of combined heat and power as well as waste to energy solutions.
Energy efficiency	Support	Cummins is a member of Department of Energy Better Buildings, Better Plants Program and is active in various industrial energy efficiency groups, both sector specific and general at national and regional levels.	We promote and model industrial energy efficiency practices and are active with several government programs for energy efficiency.
Other: Product efficiency	Support	Cummins is building coalitions among various stakeholders, working with customers, government and other stakeholders as well as educating policymakers globally.	Cummins' government relations efforts in the United States include working with Congress, the White House, state governments, trade associations and industry to support the Environmental Protection Agency (EPA) in developing greenhouse gas regulations in the U.S. for heavy- duty vehicles, and to broadly educate policy makers about how regulations, economic development and competitiveness can co-exist if developed properly. Government relations also advocates for power generation systems using renewable energy.
Energy efficiency	Support	Cummins pledged support for a new Energy Management Campaign. This campaign is an effort of CEM and the International Partnership for Energy Efficiency Cooperation to spur international collaboration with a goal of 50,001 global certifications by 2020. Cummins will achieve ISO 50001 certification at a total of 40 sites by 2020. These 40 sites represent 90 percent of Cummins' energy footprint.	This campaign is an effort of CEM and the International Partnership for Energy Efficiency Cooperation to spur international collaboration with a goal of 50,001 global certifications by 2020.

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?
The American Trucking Association	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins works actively in the ATA to encourage it to be supportive of fuel economy in vehicles and of energy efficiency programs in our sector
The Business Roundtable	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins is a member of the Business Roundtable's S.E.E. Change (Society, Environment and Economy) initiative, which encourages member companies to lead by example and adopt business strategies and projects that measurably improve society, the environment and the economy. Cummins has been a regular contributor to Roundtable's annual sustainability report, including the 2016 report "Create.Grow.Sustain" Cummins' CEO chairs the International Engagement Committee and serves on the Executive Committee.
The Diesel Technology Forum	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins works actively in the DTF to encourage it to be supportive of fuel economy in vehicles and of energy efficiency programs in our sector
The Engine Manufacturers Association	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins works actively in the EMA to encourage it to be supportive of engine efficiency and of energy efficiency programs in our sector
The National Association of Manufacturers	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins works actively in NAM to encourage it to be supportive of fuel economy in vehicles and of industrial energy efficiency programs in our sector. The company is encouraging the organization to work more collaboratively with the EPA. Cummins' chief operating officer is on the board of directors.
U.S. Chamber of Commerce	Unknown	Without comprehensive climate change legislation, the	Cummins works actively with the US Chamber to encourage them to be supportive of fuel economy in vehicles and of energy efficiency programs in our sector.

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?
		Company cannot determine this group's position at this time.	
China Internal Combustion Engine Industry Association	Unknown	Without comprehensive climate change legislation, the Company cannot determine this group's position at this time.	Cummins has worked with CICEA on fuel consumption activity, NS IV readiness and how to ensure industry-wide compliance in China.

CC2.3d

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

CC2.3e

Please provide details of the other engagement activities that you undertake

i) The third key consideration of Envolve Cummins is partnering to solve complex problems. Cummins as a Company has been very active in the development of the first-ever GHG and fuel efficiency standards for heavy-duty and medium-duty vehicles in the United States. The company was involved for many years – forming a stakeholder group with other companies in the industry, writing a regulatory framework white paper, supporting the rule publicly when it was proposed and providing extensive feedback during the comment period. The rule was finalized in August 2011 with new standards that take effect for engines and vehicles starting in 2014.

ii) The Company is now working with regulators to build on the success of Phase 1 to help shape the next stage of GHG and fuel efficiency standards known as Phase 2. A key aspect for Phase 2 is to maintain the same regulatory structure with separate standards for the engine and the rest of the vehicle.

iii) Cummins participates in the Global Commercial Vehicle industry forum, a group comprised of European, North American and Japanese manufacturers of heavy-duty vehicles and engines. Cummins is also becoming more involved in GHG and fuel efficiency regulatory development in Europe, China and other regions of the world. In fact, Cummins has dedicated resources to focus specifically on the policies involving GHG and fuel efficiency regulations to help us better coordinate the Company’s global activities in developing responsible regulations that promote technologies for more efficient products with lower GHG. Cummins also hosts governmental delegations as well as non-governmental organizations at its headquarters in Indiana to learn more about GHG and fuel efficiency standards.

iv) Cummins supports technological innovation that can benefit vehicle owners and our environment. Cummins supports a separate engine standard to provide clear direction for this innovation that addresses the component that burns all the fuel and emits the CO2 and ensures enforceable requirements. A regulatory framework that includes a combination of engine and vehicle standards is the most cost effective way for customers to realize fuel savings and retain their ability to choose the right powertrain and vehicle to purchase in order to do their work.

Cummins engages on other issues as well. Our government relations staff continue to advocate globally for products and technologies that benefit the environment. These include fuel efficient generators for military applications, combined heat and power systems and distributed generation and natural gas engines. Cummins is active in efforts to remove barriers to remanufacturing and remanufactured goods globally. In the U.S., the Company is leading a coalition whose aim is to secure continued funding for the Diesel Emissions Reduction Act (DERA) to either rebuild or replace diesel-powered vehicle engines to meet more stringent emission standards or install emission reduction systems.

Cummins continues to build upon its longstanding partnerships with the U.S. Department of Energy (DOE) and other federal and state agencies to develop advances in product energy efficiency. The Company's recent portfolio of Government co-funded technology development and system integration programs stands at $173.5 million in total public/private research investment since 2010, either completed, or still active. Cummins sits on the Clean Air Act Advisory Council and the North American Council for Freight Efficiency.

Cummins in June 2016 pledged as part of the Clean Energy Ministerial's Energy Management Campaign to achieve ISO 50001 certification at a total of 40 sites by 2020 that represent 90 percent of our energy footprint. This campaign is an effort of CEM and the International Partnership for Energy Efficiency Cooperation to spur international collaboration with a goal of 50,001 global certifications by 2020.

Cummins employees are also very actively engaged at home, at work and in the community. For the seventh year in a row, Cummins employees demonstrated their passion for the environment through the Company's Environmental Challenge in our communities. More than 21,600 employees donated 72,600 hours working on 88 projects that reduced 36,819 GHGs and planted 77, 820 trees. 2016 marks the third annual June Environmental challenge, a company-wide celebration of environmental stewardship. In 2014, more 30,000 employees took part in hand-on activities, environmental "find it fix its" or educational opportunities. Cummins employees engage in their local communities by serving on boards, completing environmental projects that are part of the Community Involvement Team work and engaging in educational opportunities through projects and presentations at schools and other community partners.

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?

The Company has several groups and processes in place to ensure that our advocacy is consistent with our environmental and climate strategies. A Cummins team called Environmental Policy & Strategic Planning exists to analyze major environmental strategic opportunities and risks that affect the company globally; direct work with internal and external stakeholders to shape stances and positions on environmental affairs that impacts Cummins; and coordinate efforts across complex environmental issues to ensure consistency and adherence to our environmental and climate strategies across all activities including public policy advocacy. This team uses robust processes and guiding principles to direct Cummins' environmental policy actions. Whether the policy we are influencing is a regulation that focuses on reducing criteria pollutants, greenhouse gas emissions (GHG) or improving fuel efficiency, Cummins' policy principles ensure that we always advocate for tough, clear, and enforceable policy. These principles and our environmental mission apply to all direct and indirect activities including external relations,

partnerships, and advocacy.

In addition to our environmental policy principles and processes, the Action Committee for Environmental Sustainability (ACES) shapes the activities and goal-setting of the stakeholder areas for product in use and in design, facilities and operations, internal supply chain (logistics and packaging), employee engagement and communications and marketing. Through processes such as monthly meetings, goal tracking, and disclosure, ACES ensures that the 10 environmental sustainability principles listed below are used to develop and adhere to Cummins' climate strategy, whether internal Company actions or external engagement.
The Company has 10 environmental sustainability principles - with the last four focusing on policy:
- Develop clean, efficient products
- Grow and develop new businesses
- Develop environmentally sustainable supply chains
- Make work spaces green spaces.
- Harness the energy of employees
- Engage in the community
- Help develop responsible regulations.
- Promote technology development.
- Advocate for incentives to accelerate progress
- Support a balanced global approach.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

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

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

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 (market-based)	98%	27%	Metric tonnes CO2e per unit revenue	2005	0.000065	2015	No, and we do not anticipate setting one in the next 2 years	Cummins has already set a new intensity target in 2016, but it is not science-based. The company firmly believes, however, that it will contribute to the reduction of global GHGs.

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	Increase	29			

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%	100%	Using Market based emissions

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

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

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
Group of products	Cummins introduced more than 70 products or product updates in 2015, many addressing emissions, fuel efficiency or both as the company pursued its mission that “everything we do leads to a cleaner, healthier, safer environment.” These updates were across all product lines: engines, power generation equipment, filters, turbochargers, fuel systems, and emissions reduction equipment.	Avoided emissions	Other: Cummins defintion of fuel efficiency / carbon dioxide emisisons reduction	50%	More than 60% but less than or equal to 80%	

CC3.3

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

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	2	
To be implemented*	0	
Implementation commenced*	105	22310
Implemented*	10	1500
Not to be implemented	0	0

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
Energy efficiency: Building services	New chiller farm using high efficiency equipment at plant in Charleston, SC USA	547	Scope 2 (location-based)	Voluntary	81000	170000	1-3 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in Charleston, SC USA	162	Scope 2 (location-based)	Voluntary	24000	150000	4-10 years	6-10 years	
Energy efficiency: Processes	VFD and pump upgrade at plant in Charleston, SC USA	489	Scope 2 (location-based)	Voluntary	72000	390000	4-10 years	6-10 years	
Energy efficiency: Building services	Install water, natural gas, propane and diesel sub metering at plant in Charleston, SC USA	190	Scope 1	Voluntary	10000	85000	4-10 years	11-15 years	
Energy efficiency: Building services	Installation of highbay fans at plant in Charleston, SC USA	55	Scope 2 (location-based)	Voluntary	8000	55000	4-10 years	11-15 years	
Energy efficiency: Building services	Dry Cooler installation at plant in Columbus, IN USA	2271	Scope 2 (location-based)	Voluntary	296902	1210000	4-10 years	11-15 years	
Energy efficiency: Building services	Install VFD chiller at plant in Columbus, IN USA	159	Scope 2 (location-based)	Voluntary	20137	62000	1-3 years	6-10 years	

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
Energy efficiency: Building services	Install water, natural gas, propane and diesel sub metering at plant in Darlington, UK	192	Scope 1	Voluntary	28550	120002	4-10 years	11-15 years	
Energy efficiency: Building services	Replace compressed air controls at plant in Columbus, IN USA	856	Scope 2 (location-based)	Voluntary	108630	72000	1-3 years	6-10 years	
Energy efficiency: Building services	Install high efficiency air compressor at plant in Columbus, IN USA	498	Scope 2 (location-based)	Voluntary	63206	140000	1-3 years	6-10 years	
Energy efficiency: Processes	VFDs / Motors Efficiency Improvments at tech center in Columbus, IN USA	588	Scope 2 (location-based)	Voluntary	41383	480000	11-15 years	6-10 years	
Energy efficiency: Building services	Install Power Factor Correction Panels at plant in Columbus, IN USA	100	Scope 2 (location-based)	Voluntary	22849	136506	4-10 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in Rocky Mount, NC USA	2958	Scope 2 (location-based)	Voluntary	501000	1352700	1-3 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at warehouse in Darlington, UK	116	Scope 2 (location-based)	Voluntary	48715	157000	4-10 years	6-10 years	
Energy efficiency:	LED lighting upgrade at warehouse in Daventry, UK	24	Scope 2 (location-	Voluntary	10501	25252	1-3 years	6-10 years	

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
Building services			based)						
Energy efficiency: Building services	Replacement of Non Cycling refrigerant dryers with Cycling Refrigeration dryer at plant in Rocky Mount, NC USA	524	Scope 2 (location-based)	Voluntary	77986	260261	4-10 years	6-10 years	
Energy efficiency: Processes	Install blowers to replace open blowing utilizing compressed air at plant in Columbus, IN USA	917	Scope 2 (location-based)	Voluntary	103235	420000	4-10 years	6-10 years	
Energy efficiency: Processes	Install Variable Frequency Drive (VFD) on pumps at plant in Seymour, IN USA	287	Scope 2 (location-based)	Voluntary	23705	40000	1-3 years	6-10 years	
Energy efficiency: Building services	Install VFD on Chiller at plant in Seymour, IN USA	503	Scope 2 (location-based)	Voluntary	41537	75000	1-3 years	6-10 years	
Energy efficiency: Building services	Install a sequencer for chillers at plant in Seymour, IN USA	486	Scope 2 (location-based)	Voluntary	40126	75000	1-3 years	6-10 years	
Energy efficiency: Building services	Install a VFD on an air compressor at plant in Seymour, IN USA	418	Scope 2 (location-based)	Voluntary	34479	70000	1-3 years	6-10 years	
Energy efficiency: Building services	Various projects in China - LED lighting upgrade at plant in Xiangyang, China; Compressed Air pressure optimization and local compressor installation at	500	Scope 2 (location-based)	Voluntary	186810	198511	<1 year	6-10 years	

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
	plant in Xiangyang, China; install VFDs in Emulsion Station at plant in Xiangyang, China; Air Compressor upgrades at plant in Xian, China Installation of high speed rolling doors at plant in Beijing China; Air compressor Pressure optimization at plant in Guangxi, China; Controls for secondary chilled water pump at tech center in Wuhan, China; Natural gas station exhaust recycling transformation at tech center in Wuhan, China								
Behavioral change	42 low cost/no cost projects at plant in Phaltan, India	210	Scope 2 (location-based)	Voluntary	113270	2533	1-3 years	6-10 years	
Behavioral change	11 low cost/no cost projects at plant in Pune, India	110	Scope 2 (location-based)	Voluntary	148720	13460	<1 year	6-10 years	
Energy efficiency: Building services	Install electricity sub metering at plant in Cookeville, TN USA	294	Scope 2 (location-based)	Voluntary	34000	161000	4-10 years	11-15 years	
Energy efficiency: Building services	Air compressor replacement with efficient unit at plant in Columbus, IN USA	926	Scope 2 (location-based)	Voluntary	117000	615000	4-10 years	6-10 years	
Energy efficiency:	LED lighting upgrade at plant in Columbus, IN USA	400	Scope 2 (location-	Voluntary	60000	200000	4-10 years	6-10 years	

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
Building services			based)						
Energy efficiency: Building fabric	Vestibule installation at plant in Columbus, IN USA	91	Scope 1	Voluntary	8000	50000	4-10 years	11-15 years	
Energy efficiency: Building services	Install electricity sub metering at plant in Cookeville, TN USA	100	Scope 2 (location-based)	Voluntary	25862	55500	1-3 years	11-15 years	
Energy efficiency: Building services	LED lighting upgrade at plant in Wuhan, China	54	Scope 2 (location-based)	Voluntary	21112	27000	1-3 years	6-10 years	
Energy efficiency: Building services	HVAC upgrade at plant in Cookeville, TN USA	221	Scope 1	Voluntary	29000	500000			
Waste recovery	Compressed air heat recovery at plant in Huddersfield, UK	149	Scope 1	Voluntary	43234	32171	<1 year	6-10 years	
Energy efficiency: Building services	Outdoor LED lighting upgrade at plant in Huddersfield, UK	63	Scope 2 (location-based)	Voluntary	11586	58782	4-10 years	6-10 years	
Energy efficiency: Building services	Upgrade air conditioner at plant in Wuxi, China	180	Scope 2 (location-based)	Voluntary	26200	55000	1-3 years	6-10 years	
Energy efficiency:	Air Compressor System Upgrade at plant in Wuxi, China	139	Scope 2 (location-	Voluntary	21617	72000	4-10 years	6-10 years	

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
Building services			based)						
Energy efficiency: Processes	Rotorque CVQ Electric Actuators Replacement at plant in Wuxi, China	324	Scope 2 (location-based)	Voluntary	41027	33000	<1 year	6-10 years	
Energy efficiency: Building services	Install inverter air conditioning units at plant in Dewas, India	24	Scope 2 (location-based)	Voluntary	11383	21361	1-3 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in Dewas, India	58	Scope 2 (location-based)	Voluntary	6000	11000	1-3 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in Pithampur, India	21	Scope 2 (location-based)	Voluntary	1956	5083	1-3 years	6-10 years	
Energy efficiency: Processes	Install VFDs on coolant pumps at plant in Pithampur, India	96	Scope 2 (location-based)	Voluntary	7296	7000	<1 year	6-10 years	
Energy efficiency: Building services	Install economizers at plant in Charleston, SC USA	354	Scope 2 (location-based)	Voluntary	27650	99850	4-10 years	6-10 years	
Energy efficiency: Building services	VFDs for two air compressors at plant in Quimper, France	4	Scope 2 (location-based)	Voluntary	3400	25000	4-10 years	6-10 years	

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
Energy efficiency: Processes	Improve insulation injection press effiency at plant in Quimper, France	6	Scope 2 (location-based)	Voluntary	8600	14061	1-3 years	6-10 years	
Energy efficiency: Building services	Air compressor replacment with efficient unit at plant in Juarez, Mexico	86	Scope 2 (location-based)	Voluntary	18576	46000	1-3 years	6-10 years	
Energy efficiency: Building services	Install electricity sub metering at plant in San Luis Potosi, Mexico	157	Scope 2 (location-based)	Voluntary	30000	60000	1-3 years	11-15 years	
Energy efficiency: Building services	LED lighting upgrade at lab in Huddersfield, UK	105	Scope 2 (location-based)	Voluntary	21747	89222	4-10 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in San Luis Potosi, Mexico	490	Scope 2 (location-based)	Voluntary	40949	100000	1-3 years	6-10 years	
Low carbon energy installation	Solar PV & LED Lighting at distributor in Kilsyth, Australia	233	Scope 2 (location-based)	Voluntary	26234	137000	4-10 years	11-15 years	
Energy efficiency: Building services	Replace compressor with VFD compressor at plant in Juarez, Mexico	44	Scope 2 (location-based)	Voluntary	36748	46000	1-3 years	6-10 years	
Energy efficiency:	LED lighting upgrade at plant in Beijing China	70	Scope 2 (location-	Voluntary	14597	14700	1-3 years	6-10 years	

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
Building services			based)						
Energy efficiency: Building services	Install efficient Heat Pump Heating System at plant in Quimper, France	7	Scope 1	Voluntary	8500	20500	1-3 years	6-10 years	
Energy efficiency: Building services	Air compressor replacment with efficient unit at plant in Quimper, France	41	Scope 2 (location-based)	Voluntary	5000	85000	11-15 years	6-10 years	
Energy efficiency: Processes	Conference room lighting controls at plant in Wuxi, China	3	Scope 2 (location-based)	Voluntary	400	1000	1-3 years	6-10 years	
Energy efficiency: Building services	Upgrade HVAC in lab at in Charleston, SC USA	66	Scope 1	Voluntary	16666	25000	1-3 years	6-10 years	
Energy efficiency: Building services	Replacing several RTUs at lab in Stoughton, WI USA	104	Scope 1	Voluntary	17358	79730	4-10 years	6-10 years	
Energy efficiency: Building services	Boiler replacements with efficient units at lab in Huddersfield, UK	6	Scope 1	Voluntary	1222	53500	11-15 years	6-10 years	
Energy efficiency: Processes	Injector Scheduling (stage 1) to reduce energy consumption at plant in San Luis Potosi, Mexico	23	Scope 2 (location-based)	Voluntary	6000	6000	<1 year	3-5 years	

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
Waste recovery	Air compressor energy recovery at plant in Izmir, Turkey	100	Scope 2 (location-based)	Voluntary	45000	30000	4-10 years	6-10 years	
Energy efficiency: Building services	Air compressor upgrade at plant in San Luis Potosi, Mexico	1	Scope 2 (location-based)	Voluntary	9000	7947	<1 year	6-10 years	
Energy efficiency: Building fabric	Solatube Installation in offices and cafeteria in Juarez, Mexico	5	Scope 2 (location-based)	Voluntary	1300	1247	<1 year	6-10 years	
Energy efficiency: Building services	Install HVLS Ceiling Fans at plant in Juarez, Mexico	84	Scope 2 (location-based)	Voluntary	24000	28000	1-3 years	6-10 years	
Energy efficiency: Building services	Install Step Voltage Regulators at plant in Juarez, Mexico	40	Scope 2 (location-based)	Voluntary	8000	70000	4-10 years	6-10 years	
Energy efficiency: Building fabric	Upgrade building Insulation at plant in Neillsville, WI USA	261	Scope 1	Voluntary	25000	40000	1-3 years	11-15 years	
Energy efficiency: Building services	Transformer Replacement at lab in Stoughton, WI USA	35	Scope 2 (location-based)	Voluntary	4201	84450	11-15 years	6-10 years	

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
Energy efficiency: Processes	Test Cell 4 Upgrade at lab in Stoughton, WI USA	860	Scope 2 (location-based)	Voluntary	123341	976000	4-10 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at office in Beijing China	27	Scope 2 (location-based)	Voluntary	5160	7820	1-3 years	6-10 years	
Energy efficiency: Building services	Install separate compressor at lab in Wuhan, China	8	Scope 2 (location-based)	Voluntary	1564	1408	<1 year	6-10 years	
Energy efficiency: Processes	Install shop mist filtering system at plant in Wuxi, China	48	Scope 2 (location-based)	Voluntary	8760	43802	4-10 years	6-10 years	
Energy efficiency: Processes	Installation of VFD for fans & pumps at plant in Ranjangaon, India	62	Scope 2 (location-based)	Voluntary	3000	7000	1-3 years	6-10 years	
Energy efficiency: Building services	LED lighting upgrade at plant in San Luis Potosi, Mexico	75	Scope 2 (location-based)	Voluntary	15000	29000	1-3 years	6-10 years	
Energy efficiency: Building services	Heating system optimization at plant in Craiova, Romania	67	Scope 1	Voluntary	14000	43000	4-10 years	6-10 years	
Energy efficiency:	LED lighting upgrades at plant in Craiova, Romania	90	Scope 2 (location-	Voluntary	3800	17000	4-10 years	6-10 years	

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
Building services			based)						
Energy efficiency: Building services	Install ambient light & occupancy sensors at plant in Craiova, Romania	75	Scope 2 (location-based)	Voluntary	5000	7000	1-3 years	6-10 years	
Energy efficiency: Building services	Install natural gas sub metering at plant in Darlington, UK	80	Scope 2 (location-based)	Voluntary	10000	9000	<1 year	11-15 years	
Low carbon energy installation	Install Solar Water Heating for showers at plant in Craiova, Romania	100	Scope 1	Voluntary	3800	58000	11-15 years	11-15 years	
Energy efficiency: Building services	Sub-meter installation at plant in Stamford, UK	35	Scope 2 (location-based)	Voluntary	27000	68000	1-3 years	11-15 years	
Low carbon energy installation	Solar PV installation at plant in Stamford, UK	120	Scope 2 (location-based)	Voluntary	26700	50000	1-3 years	11-15 years	
Energy efficiency: Building services	LED Lighting Upgrade at plant in Wuxi, China	100	Scope 2 (location-based)	Voluntary	15000	30000	1-3 years	6-10 years	
Energy efficiency: Building services	HVAC upgrade at Office in Wuxi, China	23	Scope 2 (location-based)	Voluntary	11000	54000	4-10 years	6-10 years	

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
Energy efficiency: Building fabric	High speed door installation at plant in Wuxi, China	6	Scope 2 (location-based)	Voluntary	9000	25000	1-3 years	6-10 years	
Energy efficiency: Building services	Air Compressor VFD installation at plant in Wuxi, China	40	Scope 2 (location-based)	Voluntary	11000	25000	1-3 years	6-10 years	
Energy efficiency: Processes	VFD installation for paint shop blower at plant in Phaltan, India	25	Scope 2 (location-based)	Voluntary	3700	3470	<1 year	6-10 years	
Energy efficiency: Building services	LED Lighting Upgrade at plant in Phaltan, India	100	Scope 2 (location-based)	Voluntary	10700	51000	4-10 years	6-10 years	
Energy efficiency: Building services	Energy Submetering and dashboard for plant in Kent, UK	85	Scope 2 (location-based)	Voluntary	16600	60000	4-10 years	11-15 years	
Energy efficiency: Building services	BMS Occupancy zone valves/controls for plant in Kent, UK	120	Scope 2 (location-based)	Voluntary	31000	45450	1-3 years	6-10 years	
Energy efficiency: Building services	SEU Submetering & Dashboard for plant in Fridley, MN USA	680	Scope 2 (location-based)	Voluntary	75000	386000	4-10 years	11-15 years	
Energy efficiency:	LED Lighting Upgrade for plant in Fridley, MN USA	1500	Scope 2 (location-	Voluntary	57000	250000	4-10 years	6-10 years	

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
Building services			based)						
Energy efficiency: Building services	Main Boiler VFD for plant in Fridley, MN USA	44	Scope 2 (location-based)	Voluntary	18000	28000	1-3 years	6-10 years	
Energy efficiency: Processes	VFD for AHU Test cell for plant in Fridley, MN USA	40	Scope 2 (location-based)	Voluntary	20000	35000	1-3 years	6-10 years	
Energy efficiency: Processes	VFD motor / pump retrofit for plant in Fridley, MN USA	250	Scope 2 (location-based)	Voluntary	27000	125000	4-10 years	6-10 years	
Energy efficiency: Processes	Test Cell Energy Recovery for plant in Fridley, MN USA	56	Scope 2 (location-based)	Voluntary	5600	30000	4-10 years	6-10 years	

CC3.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In the UK, meeting the requirements of the Carbon Reduction Commitment Energy Efficiency Scheme (CRC)
Dedicated budget for energy efficiency	Since 2007, Cummins has implemented an energy efficiency capital fund to finance energy-related projects. Cummins has a comprehensive investment plan designed to achieve the Company's 2015 energy and GHG intensity goals, as well as the new 2020 energy and GHG intensity goals. In 2015, Cummins used this fund to complete 102 capital projects, with a total investment of $10.2 million and annual cost savings of $2.8 million. To support Cummins' DOE goal, an additional $12 million has been allocated for 2016.
Dedicated budget for other emissions reduction activities	A central budget is provided to fund corporate energy and GHG initiatives, including the Cummins Energy Champion program and implementing ISO 50001 across the Cummins Enterprise. Cummins now has nine sites certified to ISO 50001: Cummins Turbo Technologies, Huddersfield, U.K.; Columbus Engine Plant, Rocky Mount Engine Plant in North Carolina, Daventry Engine Plant in the UK,, CGT Stamford alternator plant in the UK, Darlington Engine Plant in the UK,, Columbus Technical Center in Indiana, Jamestown Engine Plant in New York, and Tata Cummins Ltd in India with 7 more sites to be added in 2016. $80,000 has been allocated for 2016 to support the implementation of these programs.
Employee engagement	Cummins has trained a broad network of Energy Champions who coach and mentor site Energy Leaders to find and implement, through a process called an energy treasure hunt, low and no-cost energy projects that also save money for their sites. Labels on plant equipment make energy use and cost visible and empower employees to turn off equipment when not use when appropriate. To date, the Company now has nearly 500 trained Energy Champions at over 40 sites in the US, UK, India, China, Mexico, Brazil, Romania and Germany.
Financial optimization calculations	Cummins uses a model of the internal rate of return to establish a baseline IRR for funded energy efficiency projects.
Internal price of carbon	Cummins uses the cost of carbon as part of the financial decision making process in energy efficiency capital funding of projects.
Partnering with governments on technology development	Cummins has long worked in partnership with the U.S. Department of Energy (DOE) to develop advances in diesel engines and related technologies. Cummins is partnering with the DOE in the Better Plants Challenge, where the Company committed to a 25% energy intensity reduction (from 2005 through 2015, normalized to revenue), provide transparent energy reporting, share best practices and implementation models. Cummins achieved its 2015 energy intensity goal, has shared the showcase plant-wide energy improvement project at the Jamestown NY engine plant, and the implementation model for the Company's Energy Champion program. In addition, Cummins is working with the DOE to pilot the Superior Energy Performance system. The engine plant in Rocky Mount, NC was the first to be SEP certified; three additional sites are currently implementing through the SEP Accelerator program. Cummins presented its program at the 2015 Better Buildings Summit to share information
Dedicated budget for low carbon product R&D	Our research and technology budget, a subset of our publically released research and development spending, in any given year is up to 10% of R&D spending. It is estimated that 85% of this budget is dedicated to low carbon product development and other emissions reductions activities.
Dedicated budget for other emissions reduction activities	Our research and technology budget, a subset of our publically released research and development spending, in any given year is up to 10% of R&D spending. It is estimated that 85% of this budget is dedicated to low carbon product development and other emissions reductions activities.

Method	Comment
Internal incentives/recognition programs	Cummins has conducted company-wide environmental awards since 2005, called the Chairman's Environmental Awards program. Each year, sites are encouraged to submit applications for the awards, using a common template and judged by a panel of Cummins energy and environmental leaders. Award winners are honoured through company communications, and by attending a recognition dinner with senior leaders and the Cummins Board of Directors. In 2015, 17 energy-related projects were submitted, and two (one from Phaltan, India, and the other from Rocky Mount, North Carolina) were selected as Chairman's Award winners.
Internal finance mechanisms	In addition to the dedicated capital fund, energy and GHG reduction projects are also implemented through normal channels. Sites implement energy efficiency projects and select energy efficient options for projects by using the same financial tools and investment criteria as are used for the dedicated capital fund. In 2015, Cummins completed 30 projects with a total investment of $1.8 million and annual cost savings of $0.8 million.
Partnering with governments on technology development	The Company's recent portfolio of Government co-funded technology development and system integration programs stands at $191.8 million in total public/private research investment since 2010, either completed, or still active. A diverse set of program partners, led by the U.S. Department of Energy, also includes California Energy Commission, California's South Coast Air Quality Management District, and Southern California Gas Company. The new projects in the portfolio, valued at a total of $18.2M are: $9.0M Diesel heavy-duty BTE55;$2.96M Natural Gas high horsepower BTE55; $6.30M ETREE – Electric Truck with Range Extending Engine

CC3.3d

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

Further Information

Page: CC4. Communication

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	Sustainability report pages 16-69	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/Cummins_Sustainability_Report_2016.pdf	
In other regulatory filings	Complete	Annual report on Form 10-K pages 12 and13	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/Cummins Inc. 2015 Annual Report on Form 10-K-1.pdf	
In voluntary communications	Complete	Globally Envolved newsletter, all	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/GloballyEnvolved_Issue 1.pdf	
In voluntary communications	Complete	CEO letter in Business Rountable Annual Sustainability Report, page 47	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/BRT 2016 Sustainability Report.2016.04.22_2.pdf	
In voluntary communications	Complete	Clean Energy Ministerial press release, all	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/Cummins CEM press release.docx	
In other regulatory filings	Complete	Redefining Efficiency Product CO2 emissions brochure, all	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/Cummins_FuelEfficiencyBrochure_Oct2015.pdf	
In voluntary communications		Clean Energy Ministerial ISO50001 case study, all	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC4.1/CEM_EM_Award_CaseStudy_Cummins Inc_May 2016.pdf	

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
Fuel/energy taxes and regulations	Carbon Reduction Commitment (CRC) energy efficiency legislation enacted in the UK on April 1, 2010 could pose a risk for Cummins.	Increased operational cost	Up to 1 year	Direct	Virtually certain	Low	Cummins entities in the UK are within the scope of the Carbon Reduction Commitment (CRC) regulations developed to drive greenhouse gas reductions in the public and private sectors. Cummins' payment to the UK Environmental Agency in 2015 was	Cummins has a robust energy efficiency program that includes market innovations such as a central energy efficiency capital fund and an Energy Champions program. Examples of projects completed at Cummins' sites in the UK in 2015 including LED lighting upgrades, compressed air	Any additional cost would be part of our existing process in funding and implementing energy efficiency projects. In 2013 capital spent for energy efficiency projects in the UK was $774,000.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							approximately $1 million USD. Cummins understands there are negative financial implications if the Company's GHG performance worsened.	heat recovery, building management system upgrades, boiler replacements, sub-meter installation, solar PV installation, and installation of building management system occupancy zone valves/controls.	
Emission reporting obligations	A potential risk is some form of U.S. federal legislation or regulation may be forthcoming with respect to regulating manufacturers' greenhouse gas emissions	Other: additional employees needed	3 to 6 years	Direct	About as likely as not	Low	The cost of the environmental data collection and tracking system including the human resources to support it is less than $500,000 per year.	In 2010, Cummins implemented an environmental data collection and tracking system that made the gathering and public reporting of performance data for Cummins locations easier and more accurate.	The yearly cost of service with service provider plus human resources for support. If there is regulation, possible additional headcount.
Product efficiency regulations and standards	The finalization of greenhouse gas and fuel efficiency standards for medium-and heavy-duty vehicles in the	Other: regulatory risk of non compliance and increased product	1 to 3 years	Direct	Virtually certain	Low-medium	There are costs associated with certifying our engines to a new regulatory regime for CO2 and fuel efficiency.	We have worked with the regulators to ensure that this new regulatory regime aligns directly with our existing testing, certification and	The incremental spending is expected to be low given our ongoing work on technology development

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	US could pose a risk for Cummins.	development cost						compliance for our current engines as certified to existing criteria emissions standards (particulate matter and oxides of nitrogen). Additionally, we have developed and are already implementing technology roadmaps to meet the new GHG and fuel efficiency standards	and alignment with the existing regulatory structure.
Carbon taxes	Carbon taxes mean additional costs for energy used in Cummins' facilities or higher cost for Company managed freight.	Increased operational cost	>6 years	Direct	Unlikely	Low-medium	The implications are higher operating costs for the company.	We already have a comprehensive structure in place to measure, report and reduce greenhouse gas emissions and energy use at our facilities through the existing energy efficiency team and Energy Champions program.	Any additional costs would likely be part of our existing process in funding and implementing energy efficiency projects
Product labelling regulations and standards	An opinion of various stakeholders in the heavy-duty truck	Other: does not reflect actual performance	>6 years	Direct	About as likely as not	Low-medium	It would depend on the regulatory structure that generates the	We are active in educating stakeholders on the merits of a regulatory structure	No additional costs are identified.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	manufacturing industry is that labels should capture overall vehicle performance. This believe introduces complexities and concerns for an independent engine manufacturer that doesn't make vehicles such as Cummins.						information for the label	that recognizes engine and vehicle performance separately	
Uncertainty surrounding new regulation	If regulation is passed that is not clear, tough, fair or enforceable, that could pose a risk for Cummins.	Inability to do business	>6 years	Direct	About as likely as not	Medium	If regulations are not clear or do not provide sufficient lead-time, then we may not have products ready to sell in a market. Additionally, if regulations are not enforced, then Cummins will invest to develop compliant product while others in a country may not and thus put our products at a competitive disadvantage.		

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 pattern	Potential for inadequate or unreliable water supplies in the long-term horizons, which could lead to operational disruptions, increased water pricing, investment in contingency plans, and increased capital expenditures to manage growth within water use allocation limits. The regions we have identified are China (Hai Ho river basin); India (Krishna river basin); Mexico	Reduction/disruption in production capacity	>6 years	Direct	Likely	Medium	Cummins conducted detailed watershed assessments to facilities identified as at risk. BFCEC, the site in China represents about 3.5 percent of company's cost of goods sold (COGS). The two locations comprises of Megasite in Phaltan and manufacturing and tech center operations in Kothrud, Pune, both located in water scarce areas and are our biggest operations in India. Combined they are about 3	Management method varies by site, but can include continued water conservation measures in existing operations, increase in water storage capacity, and deployment of low/no water use processes such as air cooled chiller systems where warranted based upon facility water dependency. These systems increased capital expenditure and increased operating costs related to higher energy use, but off-set the	Water and energy efforts are often integrated at Cummins. We have spent $1.2 million at sites in water stressed areas for regenerative dynos to manage the costs associated with the energy impact of water conservation measures.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	(Panuco river basin) and Brazil (Paraiba Do Sul river basin).						percent of COGS sold but uses 7.8 percent of water withdrawn. San Luis Potosi has the biggest operations for Cummins in Mexico and located in the high water stress region. About 3.3 percent of company's total water withdrawn is in this region that represents about 3.5 percent of COGS. Cummins Brasil Ltda, the site in Brazil, was added to the risk list due to specific water issues arising in the area. Using about 1.5 percent of company's total water withdrawn, the site in the watershed represents about	potential risks associated with interruption of operations. However, Cummins is also using technologies such as regenerative dynos to manage the costs associated with the energy impact. Also,Cummins has developed goals that include community alignment .	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							4 percent of COGS.		

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
Changing consumer behaviour	Consumers may prefer products that compete with what Cummins produces and that could be a risk to our business.	Reduced demand for goods/services	Unknown	Direct	About as likely as not	Medium	The financial implications are hard to quantify as changes in consumer preferences often take time. However, the risk is that customers will move to substitute products that compete with ours and we are slow to react and lose sales.	We have a very broad research and development program that is constantly reviewing and investing in new technologies, fuels, etc. As a result, we have a variety of ongoing projects looking at alternatives and are already deploying very efficient engines and power generation equipment that can use a variety of fuels including biodiesel and	In a typical year, Cummins spends approximately three-quarters of its research and development budget on fuel efficiency and emissions reduction related product efficiency. In 2014, that was approximately $565 million.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								natural gas. For example, Cummins was one of the four prime contractors leading SuperTruck teams, each developing their own visions of trucking's future. SuperTruck was one of several initiatives under the 21st Century Truck Partnership, which is a public-private effort to further stimulate innovation in the trucking industry. SuperTruck averaged a 75 percent increase in fuel economy, a 43 percent reduction in greenhouse gas (GHG) emissions and an 86 percent gain in freight efficiency in 24-hour, head-to-head testing against a 2009 baseline truck – all significant improvements - in late 2013 testing in the US. As natural gas has become	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								increasingly available, Cummins has been developing a full line of natural gas engines, both through its own engine business and through our joint venture, Cummins Westport Inc.	
Fluctuating socio-economic conditions	The financial condition of consumers in emerging markets may be affected by climate-related developments.	Reduced demand for goods/services	3 to 6 years	Indirect (Supply chain)	About as likely as not	Low-medium	The financial implications are hard to quantify as changes in customer purchase trends happen over time. However, the risk is that end user customers - those who buy the goods that trucks powered by Cummins engines deliver - will have diminished buying power. Consequently, truck makers will deliver fewer goods and have less of a need to purchase newer	We have four complementary operating segments: Engine, Distribution, Components and Power Generation. These segments share technology, customers, strategic partners, brand recognition and our distribution network in order to compete more efficiently and effectively in their respective markets. In each of our operating segments, we compete worldwide with a number of other	No additional cost to operations.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							trucks with newer engines.	manufacturers and distributors that produce and sell similar products. Our products compete primarily on the basis of performance, fuel economy, speed of delivery, quality, customer support and price. Cummins works to balance revenue among business units and geographies. For example, in 2015, Cummins revenue was composed in this manner: engine 43%; distribution 25% components 21%; power generation 11%. 61% of sales were in the US - and our strong North American presence has helped offset weakness in international markets.	

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

CC5.1e

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

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	Cummins is positioning itself to participate in geographies that are diesel marginal power markets by combining renewable sources of generation to reduce the consumption of diesel by less than 20%.	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	Medium	Cummins is experiencing significant demand from customers to reduce fuel consumption in prime power markets. This is expected to be a $10 billion market that is growing.	Develop business capabilities globally to address this market	Investment of capital and resources for further business development, engineering and sales force increases would be part of business unit expenses.
Renewable energy regulation	Cummins capability in Micro-grids and Distributed Generation as a result of	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	Medium	Total current Micro-grid market size is about $17 billion. Genset	We are managing this by: - educating regulators about the	No other additional costs identified.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	renewable energy goals and improvement of grid resiliency can provide opportunities.						market size is estimated to be around $1-3 billion by 2018. Cummins expects to participate in this market.	positive aspects of combined heat and power plus alternative gas units - developing the right microgrid business model that includes innovation beyond the technology - educating regulators about using gen sets as a fast-ramping flexible generation solution to address the volatility on the grid with higher penetration of intermittent renewable energy. - advanced technology research (high efficiency gensets, power electronics) - strategic partnerships	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								with renewable energy companies and Independent Power Producers - new hybrid product launches (already have for telecom applications) - development of new business models that combine natural gas generation (as opposed to diesel) for gird firming as a result of higher renewable penetration	
Product efficiency regulations and standards	While working to develop an advanced waste heat recovery system for the SuperTruck program, Cummins Turbo Technologies	New products/business services	>6 years	Direct	Likely	Medium	This technology results in reduced fuel consumption and reduced CO2 output. Estimated savings is 5 percent in fuel savings,	We are managing this opportunity as a component that could be sold to external customers as are our other components.	The funding for this project has been a combination of Cummins funding that was for several years then supplemente

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	developed the Electrical Waste Heat Recovery Turbine Expander. This turbine expander uses an organic rankine cycle to capture what would otherwise be lost energy, in the form of heat and then turns it into useful mechanical or electrical power.						resulting in $5,000 savings per year.		d by a grant from the U.S. Department of Energy. It is now part of our research and technology budget, a subset of our overall research and development spending.
Fuel/energy taxes and regulations	The Carbon Reduction Commitment Energy Efficiency scheme enacted in the UK in April 2010 can present opportunities for Cummins.	Reduced operational costs	Up to 1 year	Direct	Very likely	Medium	Globally, energy efficiency reductions are saving Cummins approximately $40 million annually.	Plant efficiency is already part of energy efficiency efforts.	Plant efficiency is already part of energy efficiency efforts.
Product efficiency regulations	Greenhouse gas regulation and fuel	New products/business services	1 to 3 years	Direct	Very likely	Medium	Technology to meet future greenhouse	The value package introduction	In a typical year, Cummins

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
and standards	efficiency standards for medium and heavy duty commercial vehicles can present opportunities for Cummins.						gas regulation and fuel efficiency standards is already part of our technology roadmaps and planning	and product preceding technology planning as part of our standard innovation management process is how we manage this opportunity	spends approximately three-quarters of its research and development budget on fuel efficiency and emissions reduction related product efficiency. In 2014, that was approximately $565 million.
Voluntary agreements	Cummins could be presented with research and development opportunities to meet agreements.	Investment opportunities	>6 years	Direct	About as likely as not	Medium	As an example,	We would leverage our existing relationships with universities and private-public partnerships.	Costs are unknown, but they could involve matching funding from Cummins, included in part of our research and development budget.
Fuel/energy taxes and regulations	Higher fuel prices could drive customer preference to more fuel efficient	Increased demand for existing products/services	>6 years	Direct	About as likely as not	Medium	The Department of Energy in 2016 announced that Cummins	We would manage this through our existing energy and product	We would manage this through our existing energy and product

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	vehicles and Cummins could benefit.						Corporate Research and Technology (Columbus, IN) will receive $4.5 million to develop and demonstrate a Class 6 plug in hybrid delivery truck that reduces fuel consumption by 50 percent.	efficiency platforms.	efficiency platforms
Carbon taxes	Higher fuel prices could drive customer preference to more fuel efficient vehicles and Cummins could benefit.	Increased demand for existing products/services	Unknown	Direct	About as likely as not	Medium	The Department of Energy in 2016 announced that Cummins Corporate Research and Technology (Columbus, IN) will receive $4.5 million to develop and demonstrate a Class 6 plug in hybrid	We would manage this through our existing energy and product efficiency platforms	We would manage this through our existing energy and product efficiency platforms

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							delivery truck that reduces fuel consumption by 50 percent.		
Emission reporting obligations	Cummins' reporting systems allow us to be well positioned if governments could regulate that companies account for their carbon emissions.	Other: Reputational benefit	>6 years	Direct	Likely	Low-medium	The financial implications would be avoidance or future fines or penalties, possibly in the millions of dollars, resulting from the inability to report.	Management would be through the use of our existing environmental management reporting system.	There are no direct costs associated with emission reporting obligations.
Air pollution limits	Criteria emissions standards for heavy duty commercial vehicles can present opportunities for Cummins.	New products/business services	1 to 3 years	Direct	Very likely	Medium	We see no real financial implications at this time. Technology to meet future emissions standards is already part of our technology roadmaps and planning. The Cummins Westport ISL G “Near Zero” engine	The value package introduction and product preceding technology planning as part of our standard innovation management process is how we manage this opportunity	In a typical year, Cummins spends approximately three-quarters of its research and development budget on fuel efficiency and emissions reduction related product efficiency. In 2015, that

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							is the only engine on the market that currently meets the California Air Resources Board voluntary 0.02 g/bHp-Hr NOx certification level.		was approximately $550 million.
International agreements	The Paris Agreement, Nationally Determined Contributions, and other related actions such as bilateral agreements on climate change between nations could present opportunities for Cummins.	Increased demand for existing products/services	>6 years	Indirect (Supply chain)	More likely than not	Unknown	No financial implication are identified at this time	Cummins continues to be a catalyst for climate action globally as countries pursue pathways to mitigate and adapt to climate change over the next several decades. Cummins will continue to use our products and services, current environmental sustainability goals, and focus on	We have identified no incremental costs.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								innovation to help countries meet their commitments to international agreements. Cummins' climate change strategy positions us to seek opportunities to be on top of emerging climate and technology trends in all 190 countries in which we operate including key markets such as China, India, US, EU, Mexico, and Brazil. Cummins is using a long-term global outlook and roadmap aligned to the Paris Agreement's key milestones including	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								emissions “stocktakes,”	
Renewable energy regulation	Cummins could enter into a virtual power purchase agreement as a way to increase our commitment to renewable energy. Cummins has operations in both regulated and deregulated utility states which directly effects the opportunities for renewable energy investment. In deregulated states where Cummins operates, we are able to install on-site renewable energy as a way to increase our commitment.	Investment opportunities	1 to 3 years	Direct	About as likely as not	Low-medium	Financial implications could be possible and beneficial depending on contracts negotiated and outcomes of those contracts. VPPA can serve as a partial hedge of US electricity spend and	We have a Cummins VPPA team that is comprised of cross-functional representatives from key functions needed to evaluate and possibly execute a VPPA. These functions include environment, finance, accounting, legal and treasury.	No other additional costs identified.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	However, the majority of our operations are located in states that do not allow choice of utility and limits options. Virtual power purchase agreements provide Cummins with the opportunity to work with renewable energy developers to increase the renewable energy capacity/supply in the regulated states where we operate. Changes in utility regulations in regulated states would expand the opportunities for renewable energy								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	installations for Cummins.								
General environmental regulations, including planning	Cummins has a long-range global product planning process that consider potential environmental regulations as part of the process.	New products/business services	>6 years	Direct	Very likely	Medium-high	The intent of value package introduction (VPI) process is to defend and grow revenue through the introduction of new and/or incrementally improved products.	We manage our VPI process through what Cummins called synchronous business planning, a highly choreographed and integrated sequence of product planning, demand forecasting and management review.	No additional cost to implement, as VPI is a long-standing planning process at Cummins.
Product efficiency regulations and standards	Cummins has additional project funding through the Supertruck2 project via U.S. Deptartment of Energy. Cummins and partners (Peterbilt, Eaton and others) will engineer a	New products/business services	3 to 6 years	Direct	More likely than not	Medium-high	Project will cost a total of $40 million.	Cummins, as the primary contractor for this proposal, will manage the overall project using the following items as a guide to ensure a high quality, timely delivery of the objectives;	No additional cost to implement, as Cummins was a participant in the first Super

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Class 8 Truck and trailer to increase the freight efficiency (tons of freight per gram of CO2 emitted per mile hauled) by a factor of not less than 125%. The fuel economy will improve by a factor of 2 while the weight of the vehicle will be reduced to make up the 125% increase. The engine will demonstrate 50% Brake Thermal Efficiency over the drive cycle. Additionally, the engine will demonstrate a peak efficiency of 55%. The ST2 project is proposed to deliver a high efficiency,							statements of work for the project and individual subcontractors, w ork breakdown structure and contracts reflecting that work, and a detailed workflow, resource loading and master schedule. The project is organized into five budget periods and concurrent phases; Vehicle baseline with model development to create a path to target, model validation, system development, engine demonstration and vehicle build, and	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	diesel powertrain system and Class 8 tractor and trailer demonstration. It will consist of an all new engine from Cummins and vehicle from Peterbilt. The project will affect all major systems of the vehicle in order to maximize the performance while considering the cost of each technology being applied to ensure a positive financial return for the manufacture sector as well as end user. The fuel economy will improve by a factor of 2 while the weight of the							finally, full vehicle system demonstration.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	vehicle will be reduced to make up the 125% increase.								

CC6.1b

Please describe the 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 precipitation extremes and droughts	Changes in frequency of extreme weather events	New products/business services	Up to 1 year	Direct	Very likely	Medium	With the increased emphasis on carbon emissions, and the impact of shale discoveries and their potential to keep gas prices low for the long term, distributed generation with natural gas, whether it is used in a combined heat and power	Cummins in Africa is investing in building gas power generation capability through the roll out of project companies in Nigeria, South Africa and East Africa. We have invested in a new joint venture in Nigeria that is the dedicated gas engineering, procurement & construction (EPC) company in	We expect our gas generation sales to grow 300% over the next 3-5 years. We also expect that governments and private industry in Africa to make significant investments in Angola, West Africa, Tanzania and Mozambique to build distribution infrastructure as

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							application, or as a simple power generation application has potential for further revenue.	the country. We have also invested in another JV that operates gas power plants as an Independent Power Produce (IPP).	there has been significant finds of gas reserves. Overall, we are investing from $10 - $50 million over the program life.
Change in precipitation extremes and droughts	Changes in frequency of extreme weather events	New products/business services	Up to 1 year	Direct	Likely	Medium	With increased frequency of weather related events the impact of power outages or significant fluctuation of power prices the ability to use predictive analytics combined with gas generation allows C&I customers to achieve increased resilience, cost savings and achieve lower carbon footprint than diesel standby generation	Cummins Energy Ventures is investing in predictive analytics of wholesale power market with the development of IPP's in N. America to achieve economic and resiliency through natural gas "behind the meter" generation.	We expect to deploy over 300 megawatts of distributed generation gas assets across the deregulated N. America market over the course of the next 5 years in the muncipal, energy retailer and commercial and industrial segments.

CC6.1c

Please describe the 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
Reputation	Cummins reputation as a sustainability leader provides opportunities.	Increased stock price (market valuation)	1 to 3 years	Direct	More likely than not	Low-medium	Having a reputation as a sustainability leader could cause the financial community to reward Cummins with a higher market valuation.	The Company's corporate environmental sustainability team continues to be the driving force behind the development of sustainability goals and reporting on the progress in achieving them. The Cummins Leadership team reviews a balanced scorecard each quarter, which is a collection of data spanning several key aspects of the company's performance. Eight environmental metrics are included in the scorecard: Energy Intensity, GHG	We believe no incremental costs to exist, as most of the structures and resources are in place.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Intensity, Waste Recycling Rate, Waste Zero Disposal, Water Intensity, Water Neutral Sites, CO2 reduction from products in use, CO2 reduction from logistics.. These metrics are the same environmental metrics that are separately submitted to the Chief Operating Officer and have been incorporated into the balanced scorecard so that the entire leadership team feels accountable for the results.	
Changing consumer behaviour	Consumers will become more interested in fuel efficient products that Cummins produces.	New products/business services	1 to 3 years	Direct	Likely	Medium-high	The financial implication is hard to quantity, as the shift in consumer preference would happen slowly	We would use existing corporate strategy and growth office structure to evaluate new	We have identified no incremental costs.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							over time. We do project that by 2020, nearly 30 percent of our high horsepower engines will be natural gas.	business opportunites in adjacent markets and technology.	
Fluctuating socio-economic conditions	The desire for more goods as a result of a growing global middle class would create greater demand for products to be shipped in trucks.	Increased demand for existing products/services	Up to 1 year	Direct	Very likely	Medium-high	The potential implications could be large, but hard to quantify, as sales increases happen over time. But Cummins projects increased sales in China and India as the size of the middle class increases and more and more goods need to be shipped in trucks equipped with Cummins engines. In addition, as emissions regulations become more stringent globally, Cummins is in the best position to profit from those regulations.	We would manage this opportunity by using existing corporate strategy and growth office structure to evaluate new business opportunites in adjacent markets and technology.	We see no incremental costs beyond what sites would normally do to prepare for increased demand.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Increasing humanitarian demands	Cummins firmly believes that our business is only as healthy as the communities it serves.	Wider social benefits	Up to 1 year	Direct	More likely than not	Medium	Cummins does already give humanitarian financial aid and sometimes product donations to countries where there has been a need.	Our Corporate Responsibility department and The Cummins Foundation handle this work	The Company invested $18.1 million in its corporate responsibility efforts in 2015, which includes funding for The Cummins Foundation, employee volunteer hours on Company time, donations and sponsorships from operating funds and staff involved in our efforts around the world.
Changing consumer behaviour	Customers will have an increasing preference for alternative and lower carbon fuels, providing opportunities for Cummins.	New products/business services	1 to 3 years	Direct	Very likely	Medium	Vehicle fleets and equipment operators are increasingly exploring alternative fuels to reduce emissions, improve operating costs, or adapt to locally available fuel sources. Natural gas is often the alternative fuel of	Our current natural gas engine product line ranges from 50 to 2,700 horsepower and we are investing significantly in new natural gas products. Cummins has recently announced plans to	With a new engine requiring an investment ranging from $10 - $50 million over the program life, these new natural gas engines represent a significant investment in

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							choice for many fleets & operators. New drilling techniques have greatly expanded natural gas production, increasing the availability of natural gas, reducing fuel costs, and therefore stimulating interest in natural gas	broaden the natural gas product line with the development of several new engines. There is potential that switching from petroleum to natural gas will produce less GHG emissions, however this depends on understanding of and the methods used to reduce the methane leaks across the natural gas supply chain on a wells to wheels basis. Cummins is participating with various stakeholders, including environmental NGOs, to get the best data on methane.	alternative fuels.
Reputation	Cummins reputation as a	Other: recruiting and retaining	Up to 1 year	Direct	Virtually certain	Medium-high	Cummins can save money on	Continuing to educate	None additional identified

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sustainability leader provides opportunities.	talented employees					recruiting costs by retaining employees who desire to work at an environmentally sustainable company. Estimates are $3,000 to $5,000 to recruit a new employee.	employees about Cummins environmental actions. As part of the release of our Global Environmental Sustainability Plan, Cummins established June Environmental Month and is encouraging employees to do water, waste and energy reduction activities at home, work and in the community.	
Other drivers	Customer need for more fuel efficient products, but not driven by regulation While working to develop an advanced waste heat recovery system for the SuperTruck	New products/business services	>6 years	Direct	Likely	Medium	This technology results in reduced fuel consumption and reduced CO2 output. Estimated savings is 5 percent in fuel savings, resulting in $5,000 savings per year.	We are managing this opportunity as a component that could be sold to external customers as are our other components.	The funding for this project has been a combination of Cummins funding that was for several years then supplemented by a grant from the U.S. Department of Energy. It is

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	program, Cummins Turbo Technologies developed the Electrical Waste Heat Recovery Turbine Expander. This turbine expander uses an organic rankine cycle to capture what would otherwise be lost energy, in the form of heat and then turns it into useful mechanical or electrical power.								now part of our research and technology budget, a subset of our overall research and development spending.
Other drivers	Customer requirement for more fuel efficient products, but not driven by regulation. Not truly change in behavior, as customers always want greater efficiency. For heavy duty pick	Increased demand for existing products/services	>6 years	Direct	Very likely	Medium	When used together for maximum efficiency, these technologies could result in an 8-13 percent CO2 reduction	We are managing this opportunity as a continuing part of our engine technology development.	Costs are included in our research and technology budget, a subset of our overall research and development spending.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	up truck engines, key technologies in development are: combustion and air handling friction and parasitics high efficiency aftertreatment variable valve actuation weight management stop start transmission integration								
Other drivers	Customer requirement for more fuel efficient products, but not driven by regulation. Not truly change in behavior, as customers always want greater efficiency. For medium heavy-duty vocational engines, key technologies in development are: combustion	Increased demand for existing products/services	>6 years	Direct	Very likely	Medium	When used together for maximum efficiency, these technologies could result in a 5-11 percent CO2 reduction	We are managing this opportunity as a continuing part of our engine technology development.	Costs are included in our research and technology budget, a subset of our overall research and development spending.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and air handling friction and parasitics high efficiency aftertreatment variable valve actuation								
Other drivers	Customer requirement for more fuel efficient products, but not driven by regulation. Not truly change in behavior, as customers always want greater efficiency. For heavy-duty tractorl engines, key technologies in development are: combustion and air handling friction and parasitics high efficiency aftertreatment waste heat recovery	Increased demand for existing products/services	>6 years	Direct	Very likely	Medium	When used together for maximum efficiency, these technologies could result in a 9-15 percent CO2 reduction	We are managing this opportunity as a continuing part of our engine technology development.	Costs are included in our research and technology budget, a subset of our overall research and development spending.

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

CC6.1e

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

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

Further Information

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

Page: CC7. Emissions Methodology

CC7.1

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

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sat 01 Jan 2005 - Sat 31 Dec 2005	210889
Scope 2 (location-based)	Sat 01 Jan 2005 - Sat 31 Dec 2005	436871
Scope 2 (market-based)	Sat 01 Jan 2005 - Sat 31 Dec 2005	436871

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
US EPA Climate Leaders: Indirect Emissions from Purchases/Sales of Electricity and Steam
US EPA Climate Leaders: Direct Emissions from Stationary Combustion
US EPA Climate Leaders: Direct Emissions from Mobile Combustion Sources
US EPA Mandatory Greenhouse Gas Reporting Rule
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
ISO 14064-1

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

CC7.3

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

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)
HFCs	IPCC Second Assessment Report (SAR - 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	53.11	Other: kg per MMBtu	Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C:

Fuel/Material/Energy	Emission Factor	Unit	Reference
			Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.
Distillate fuel oil No 2	73.96	Other: kg per MMBtu	Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.
Liquefied petroleum gas (LPG)	61.96	Other: kg per MMBtu	Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.
Bituminous coal	97.92	Other: kg per MMBtu	Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.
Motor gasoline	70.47	Other: kg per MMBtu	Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule, 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.
Biodiesels	2.5	kg CO2e per liter	US EPA Emission Factor Hub, November 2011
Other: Ethanol 100%	1.52	kg CO2e per liter	US EPA Emission Factor Hub, November 2011

Further Information

Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)

CC8.1

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

Operational control

CC8.2

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

295463

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

No

CC8.3a

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
537597	542759	Market-based emissions reflect residual mix factors for European facilities. Residual mix factors are not currently available for facilities outside of Europe.

CC8.4

Are there are 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

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
Emissions from a recent acquisition	Emissions excluded due to a recent acquisition	Emissions excluded due to a recent acquisition	Emissions excluded due to a recent acquisition	It normally takes about 6 months to implement tracking mechanisms at an acquisition
Emissions from shared leased spaces with no control on utilities	Emissions are not evaluated	Emissions are not evaluated	Emissions are not evaluated	Cummins has no direct management of these spaces although Cummins employees occupy such locations

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	Less than or equal to 2%	Data Gaps Assumptions Extrapolation Metering/ Measurement Constraints	Most sites use utility bills to track and report the electricity / fuel usage data. However, this can be different from the actual usage due to various factors. Eg: time period of invoice might be different from the month beginning and month end dates. If a bill is not available the data might be derived through estimations / extrapolations using logical assumptions.
Scope 2 (location-based)	Less than or equal to 2%	Data Gaps Assumptions Extrapolation Metering/ Measurement Constraints	Most sites use utility bills to track and report the electricity / fuel usage data. However, this can be different from the actual usage due to various factors. Eg: time period of invoice might be different from the month beginning and month end dates. If a bill is not available the data might be derived through estimations / extrapolations using logical assumptions.
Scope 2 (market-based)	Less than or equal to 2%	Data Gaps Assumptions Extrapolation Metering/ Measurement Constraints	Most sites use utility bills to track and report the electricity / fuel usage data. However, this can be different from the actual usage due to various factors. Eg: time period of invoice might be different from the month beginning and month end dates. If a bill is not available the data might be derived through estimations / extrapolations using logical assumptions.

CC8.6

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

Third party verification or assurance process in place

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	Limited assurance	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC8.6a/GHG Cummins 2015 - CDP GHG Verification Statement Limited.pdf	1	ISO14064-3	100

CC8.6b

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

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

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	Limited assurance	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC8.7a/GHG Cummins 2015 - CDP GHG Verification Statement Limited.pdf	1	ISO14064-3	100
Market-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC8.7a/GHG Cummins 2015 - CDP GHG Verification Statement Limited.pdf	1	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
No additional data verified	

CC8.9

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

Yes

CC8.9a

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

50

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC9.1

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

Yes

CC9.1a

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

Country/Region	Scope 1 metric tonnes CO2e
United States of America	162684

Country/Region	Scope 1 metric tonnes CO2e
Australia	5004
Brazil	5361
China	32775
India	22578
Mexico	5134
South Africa	1771
United Kingdom	26061
Rest of world	34095

CC9.2

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

By business division
By activity

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)
Engine Business	178057
Power Generation	39778
Distribution	48433

Business division	Scope 1 emissions (metric tonnes CO2e)
Filtration	7831
Fuel Systems	4001
Turbo Technologies	6874
Shared Services	7605
Emission Solutions	2884

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Stationary Combustion	222423
Mobile Sources	41743
Refrigerant	14076
Other Fugitive	22
Generation of Sold Electricity	17199

Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)

CC10.1

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

Yes

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)
United States of America	287375	287375	523801	0
Australia	7914	7914	8789	0
Brazil	3399	3399	25013	0
China	103795	103795	137702	0
India	69571	69571	84700	0
Mexico	22178	22178	49164	0
South Africa	2460	2460	2816	0
United Kingdom	22635	26547	48974	0
Rest of world	18270	19520	45756	0

CC10.2

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

By business division
By activity

CC10.2a

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

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Engine Business	324394	326307
Power Generation	34455	35372
Distribution	42383	42721
Filtration	38956	38857
Fuel Systems	32241	32241
Turbo Technologies	26516	27650
Shared Services	28044	28193
Emission Solutions	10608	11418

CC10.2b

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

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2c

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

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Electricity	534772	539934
Steam	2627	2627
Hot Water	198	198

Further Information

Page: CC11. Energy

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%

CC11.2

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

Energy type	Energy purchased and consumed (MWh)
Heat	496
Steam	6290
Cooling	0

CC11.3

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

1287570

CC11.3a

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

Fuels	MWh
Distillate fuel oil No 2	534682
Natural gas	569805
Propane	15795
Motor gasoline	40798
Other: Stationary Gasoline	656
Diesel/Gas oil	108223
Jet kerosene	17611

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	Comment
Other	63173	This is not necessarily low carbon.as the market based emissions is higher compared to the location based emissions

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
941141	919930	21211	1206	1206	

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	2	Decrease	Cummins estimates we decreased GHG from operations by 22,500 metric tons through more than 100 energy efficiency projects as detailed in question 3.3b.
Divestment	0	No change	not applicable
Acquisitions	2	Increase	North American and Asia Pacific Distribution acquisitions in 2015 resulted in an increase of 13,705 metric tons of CO2e
Mergers	0	No change	not applicable
Change in output		No change	Not able to calculate at CMI level due to mix of products and services
Change in methodology	0	No change	not applicable
Change in boundary	0	No change	not applicable
Change in physical operating conditions	0	No change	not applicable
Unidentified	0	No change	not applicable
Other	4	Decrease	Electricity Grids getting cleaner. Reduction in US EPA's eGrid factors and IEA's electricity emission factors in Cummins key operating regions resulted in about 36,000 metric tons of lower GHG

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?

Market-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e 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
0.00005	metric tonnes CO2e	16712700000	Market-based	1	Decrease	Total gross emissions intensity decreased due to a combined effect of emission reduction activities, acquisitions, closed sites, cleaner electricity grid factors and overall revenues

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
15.09	metric tonnes CO2e	full time equivalent (FTE) employee	55200	Market-based	3	Decrease	Lower production

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, but we anticipate doing so in the next 2 years

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

CC13.1b

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

The Kothrud Engine Plant in India just entered into a contract to buy renewable energy credits (RECs) which won't start until later in 2016. Cummins will not trade the RECs, but will permanently retire them.

CC13.2

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

No

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 of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance

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	3435000	Cummins total spend data for direct purchasing (including raw materials - metals and commodities usage) as well as total 2015 indirect purchase expenses (including IT, supply chain services, real estate, engineering, corporate services, etc.) were used to estimate the associated Scope 3 emissions. For purchased raw materials, cradle to gate approach was used	100.00%	Used 2015 indirect purchasing spend data and also emissions estimated during Cummins environmental hot spot analysis study conducted in 2012 based on 2011 data adjusted to 2015 revenue. The hot spot analysis also includes the direct purchases of metals and other raw materials that go into the manufacturing of engines

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
			to estimate the scope 3 emissions using the 2011 purchase data and was calculated for 2015 based on revenue change factor. For indirect purchasing goods and services, UK DEFRA's SIC Codes closest to the spend category and 2009 emission factors were utilized to estimate the scope 3 emissions (Reference/Source of Emission factors: Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance; June 2013; pb13944-env-reporting-guidance.pdf; defra.uk). We assume that 20% of the commodities used are MRO/Chemicals that is part of the indirect purchasing. Also we assume 50 percent of the IT and engineering purchases come under this category and rest in the capital goods category. We assume that the CMI spend on Corporate services is comprised of the following SIC categories: Insurance and pension funds - 10 percent; Auxiliary financial services - 10 percent; and Legal, consultancy, other business activities - 80 percent. The purchase expenses not tracked through the centralized database is assumed to be of the same proportion for purchase goods and services as that from the centralized tracking database		
Capital goods	Relevant, calculated	413000	Cummins total 2015 spend data for capital goods purchases in facilities & construction, IT, engineering and machinery was used to estimate	100.00%	Used 2015 indirect purchasing spend data to update the calculations as described in the calculation methodology

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
			the scope 3 emissions. UK DEFRA's SIC Codes closest to the spend category and 2009 emission factors were utilized to estimate the scope 3 emissions (Reference/Source of Emission factors: Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance; June 2013; pb13944-env-reporting-guidance.pdf; defra.uk). We assume that 100 percent of the indirect purchasing on facilities and construction is towards capital goods purchases.		
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	162000	The activity data used to quantify these activities emissions are the quantity of energy consumed for each energy type, such as electricity or natural gas. Consumption by fuel type is then multiplied by emission factors for each of the activities included in this category. Emission factors for upstream emissions of purchased fuels are based on life-cycle analysis software. Emission factors for upstream emissions of purchased electricity are based on life-cycle analysis software for the US, and on UK Defra 2012 Guidelines for other countries. Emission factors for T&D losses are based on EPA's eGRID database for the US, and on and on UK Defra 2012 Guidelines for other countries. GWPs are IPCC Second Assessment Report (SAR - 100 year).	100.00%	Includes scope 3 emissions from fuel and energy related activities from owned and operated facilities, 50:50 joint ventures subscribed to Cummins Enterprise Environmental Management System and 50:50 manufacturing joint venture where Cummins has significant influence on operations

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 transportation and distribution	Relevant, calculated	656000	Cummins used location-based scope 2 answer as a basis for calculating this answer. The 2015 spend data for transportation and distribution was assumed to be equal to 80 percent of the expenses on supply chain services. Also it was assumed 70 percent of the logistics was through road, 10 percent through rail, 10 percent through water and 10 percent through air. UK DEFRA's SIC Codes for Rail, Road, Water and Air categories and 2009 emission factors were utilized to estimate the scope 3 emissions (Reference/Source of Emission factors: Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting guidance; June 2013; pb13944-env-reporting-guidance.pdf; defra.uk).	100.00%	Used 2015 indirect purchase data for Supply Chain Services - Transportation and Distribution - to calculated the upstream transportation and distribution emissions as described in the methodology
Waste generated in operations	Relevant, calculated	6200	The Waste Reduction Model (WARM) created by the U.S. Environmental Protection Agency (EPA) was used to quantify the scope 3 emissions for the landfilled waste, combusted waste and composted waste from Cummins global facilities for the year 2015. As there were no separate categories available for incinerated waste and waste that was burned for energy recovery, both were included in the combusted waste category and default factors in the tool were used to calculate the GHG emissions. Due to non-availability of exact categories, the general refuse / garbage generated was categorized as Mixed	100.00%	In 2015, Cummins recycled about 90.4 percent of the global waste generated. This includes metals, electronic items, paper, plastics and corrugated boxes. As the model shows a GHG reduction for recycled product categories, the same was not included in the WARM model

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
			Organics as it includes primarily food waste from canteen, grass clippings from lawn etc. and the process derived industrial waste was categorized as Mixed MSW. Composted waste data from global facilities and the same was included in the emissions analysis (Reference/Source: EPA WARM Model).		
Business travel	Relevant, calculated	38000	All air travel data are tracked through a service provided to Cummins by AmEx. Emissions are calculated using US EPA EF Hub, based on short, medium, and long haul air travel categories and the associated emission factors. Car rental mileage for 2015 is provided by Hertz. The total emissions are calculated using US EPA EF Hub Passenger Car factors.	100.00%	Provided to Cummins by American Express, the air travel services provider and Hertz, car rental provider. This data is emissions from air travel for 11,097 flights and car rentals in North America as well as Worldwide
Employee commuting	Relevant, calculated	110000	Calculations derived from general country (outside of US) direct data and assumptions plus per state employee headcount data. Some direct and some derived assumptions of commuter mileage and mode of transportation. (Source of Emission factors: US EPA (2008); Greenhouse Gas Inventory Protocol Core Module Guidance - Direct Emissions from Mobile Combustion Sources, EPA Climate Leaders, Tables A-6 and A-7)	100.00%	Cummins employees outside of the US tend be use transportation modes other than single-passenger personal vehicles more than their US counterparts. While it results in fewer GHG emissions, it is harder to track. This data represents the estimates conducted in 2012 by the regional environmental leaders and adjusted for 2015 employee headcount.
Upstream leased assets	Relevant, calculated	9500	Cummins leased facilities exempt from environmental reporting that are shared facilities with no separate meter and utility bills is considered under this category. Based on the	90.00%	The list of facilities that are included in this category is maintained by the facilities real estate and the utility charges are included in the lease amount. We assume that the

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
			Area Business Organization (ABO), Business Unit (BU) and facility type (Eg: Office, Warehouse etc), scope 1 and scope 2 emissions intensity were estimated and applied based on the occupied square footage. The total square footage as well as the emissions intensity is assumed to the same as 2012		emissions related to upstream leased assets has remained constant over the year.
Downstream transportation and distribution	Relevant, not yet calculated		Most Cummins customers pay for the transportation of products sold to them, either directly or via part of an overall invoice. We do not have a tracking mechanism yet in place to determine what the emissions of that transportation are at this time.		Most Cummins customers pay for the transportation of products sold to them, either directly or via part of an overall invoice. We do not have a tracking mechanism yet in place to determine what the emissions of that transportation are at this time.
Processing of sold products	Relevant, calculated	12000	Engine weights used in the general categories of mid-range, heavy-duty and high-horsepower (as reported in annual report on Form 10-K) were derived by updating the 2012 calculation of weighted-averaged by volume of the various engine families within those three categories. Assumptions were made on the lifting height and the hoist efficiency of the winch used to drop engines into the chassis of the vehicle	90.00%	Based on engines shipped as detailed in Cummins 2015 Annual Report on Form 10-K. Installation of components are not included.
Use of sold products	Relevant, calculated	807000000	In the calculation, we used volumes by segment and engine model, which were then multiplied by the attrition rates to determine the volumes in operation each year moving forward. We used the long-standing Cummins New and Recon parts proprietary parts consumption model as	100.00%	Though the overall volume of engines was up in 2015, the associated GHG emissions went down due to product mix: • Sharp drop in engines for off-highway (construction & agriculture), HHP (mining, O&G, rail, military, etc.) & PowerGen more than off-set

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
			well as customer engineering analysis to determine the attrition rate. We then multiplied each of these yearly figures by an age factor (i.e., a 10 year old truck will not operate the same number of hours or miles as a brand new truck) and then converted miles per gallon or gallons per hour to million metrics tons of CO2.		the increase in on-highway • MMT of CO2 was up 32 for on-hwy, down 32 for off-hwy, down 36 for HHP and down 70 for PowerGen
End of life treatment of sold products	Relevant, calculated	53000	Cummins conducted a hot spot analysis to evaluate the impact of the end of life treatment of sold products. The waste related to sold product is primarily iron and steel (more than 90%). The estimates are based on landfilling, processing, and recycling of the generated wastes associated with those products. The assumption is 5% of the products are scrapped – 90% is melted / processed.. The emissions were adjusted based on the change in the number of engine units shipped between 2011 and 2015	100.00%	The emissions reported here are the estimated emissions from the scrap of all products in use in the year 2011. This is different from the forward looking end of life emissions from all products sold in the year 2015
Downstream leased assets	Relevant, calculated	46000	This represents our rental generator fleet. We have made assumptions on generator use - as some generators are used as backup power and others operate full time. The total number of rental fleet generators at North American distributor locations were collected. Total fuel usage was estimated based on the number of generators from each kW category, efficiency and monthly average run time.	100.00%	This calculation is from 1340 units rented through our North American distributors during 2012 and doesn't include similar fleets outside NA. The total emissions were adjusted proportionate to the drop in power solutions business in 2015 compared to 2012.

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
Franchises	Not relevant, explanation provided		Not applicable as Cummins doesn't have any franchises		Cummins does not have any franchises
Investments	Relevant, not yet calculated		In 2012, Cummins had reported emissions from 50:50 unconsolidated manufacturing joint ventures as emissions from investments. This is now included in Scope 1 and 2 after a change in boundary. However, Cummins understands that emissions from investments can be expanded to minority / unconsolidated joint venture operations where Cummins doesn't have operational or administrative control. Cummins hold minority stake (<20% and 20-50% equity investee) in several distributor businesses and manufacturing operations especially in North America and Asia. This is not tracked currently.		Cummins considers that emissions from investments can be expanded to minority / unconsolidated joint venture operations where Cummins doesn't have operational or administrative control. Cummins hold minority stake (<20% and 20-50% equity investee) in several distributor businesses and manufacturing operations especially in North America and Asia. This is not tracked currently.
Other (upstream)	Not evaluated		Cummins have not evaluated other upstream scope 3 emissions.		Cummins have not evaluated other upstream scope 3 emissions.
Other (downstream)	Not evaluated		Cummins have not evaluated other downstream scope 3 emissions.		Cummins have not evaluated other downstream scope 3 emissions.

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	https://www.cdp.net/sites/2016/36/4136/Climate Change 2016/Shared Documents/Attachments/CC14.2a/GHG Cummins 2015 - CDP GHG Verification Statement Limited.pdf	1-2	ISO14064-3	

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
Purchased goods & services	Change in output	1	Increase	Even though IT, Chemicals, Engineering and Real Estate spend and the estimated direct spend increased in 2015 (vs. 2014), this was offset by significant reductions in corporate and supply chain services. Cummins is using Scope 3 emissions factors based on UK Defra's SIP codes and 2015 increase in US dollar exchange rate also offset the reductions. These resulted in about the same Scope 3 emissions associated with this category.
Capital goods	Change in output	26	Increase	All four spend items contributing to this emission category (Facilities & Construction, IT, Engineering, Machinery) increased in 2015 compared to 2014. Cummins is using Scope 3 emissions factors based on UK Defra's SIP codes and 2015 increase in US dollar exchange rate also resulted in increased emissions.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	2	Increase	Though Electricity and Diesel usage increased, this was offset by reduced Natural Gas usage due to mild winter. Also, there was drop in propane as well as gasoline usage. Overall these resulted in a slight increase in overall FERA Scope 3 category
Upstream transportation & distribution	Change in output	10	Decrease	There was significant reductions in the supply chain services resulting in about 38% reduction in associated emission. Cummins is using Scope 3 emissions factors based on UK Defra's SIP codes and 2015 increase in US dollar exchange rate offset that reductions to about 10%
Waste generated in operations	Change in output	3	Increase	Total waste generated as well as associated disposal and recycling increased in 2015
Business travel	Change in methodology	11	Increase	In 2015, emissions from rental cars used for business travel were included. Also, updated the emission factors with US EPA EF Hub factors.
Employee commuting	Change in output	7	Decrease	The emission per capita estimates are estimated for each operating region. The drop in the headcount resulted in reduction in emissions.
Upstream leased assets	Change in methodology	6	Increase	The 2015 estimates are based on the leased facilities footprint in 2012. The change is due to rounding to 500 rather than 1000
Processing of sold products	Change in output	8	Decrease	There was a drop in the engine shipments in 2015 that resulted in drop in associated emissions
Use of sold products	Change in output	12	Decrease	Though the overall volume of engines was up in 2015, the associated GHG emissions went down due to product mix. Emissions were up 32% for on-highway, down 32% for off-highway, down 36% for high-horsepower and down 70% for PowerGen. Sharp drop in engines for off-highway (construction & agriculture),high-horsepower (mining, O&G, rail, military, etc.) & PowerGen more than off-set the increase in on-highway.

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
End-of-life treatment of sold products	Change in output	4	Decrease	There was a drop in the number of shipments in 2015 compared to 2014 that resulted in a drop in associated emissions
Downstream leased assets	Change in output	2	Decrease	There was a drop in the power gen rental business in 2015 that resulted in the lowered emissions

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 engagement and measures of success

Cummins fuel economy teams throughout the world implemented more than 100 fuel economy projects in 2015 for our on- and off-highway customers. Collaboration among fuel economy team members, from customer engineering to account management, has contributed greatly to new project ideas and implementation. A global fuel economy forum meets monthly to share projects and best practices to fuel ideas for additional work. Projects are prioritized by the amount of potential CO2 reduction as well as the available Cummins resources to support the project. The Company is already nearly half way toward is 2020 goal, with particular success in the off-highway market where we have more than tripled original projections. As of the end of 2015, we have achieved an annual 1.6 million metric ton (MMT) reduction toward our goal of a 3.5 MMT annual reduction. On a cumulative basis, counting work done in both 2014 and 2015, we have saved customers $926 million and 232 million gallons of diesel fuel.

There are a number of factors that have contributed to the success of our fuel economy improvement efforts. The fuel economy percent improvement for some large initiatives delivered results greater than originally estimated. In addition, we have exceeded our initial estimate of achieving between two and five percent improvement per project for our customers; average project fuel economy improvement is 6.7 percent.
Cummins spends approximately $1 billion per month in goods and services with its supplier partners. This translates into thousands of tons of material, which must

be mined, milled, packaged and shipped to the company's facilities. Therefore being good stewards of Cummins' spend means taking responsibility for the environmental footprint of the company's supply chain.

With that in mind, Cummins has introduced five initiatives as expectations of its supply base. Cummins currently maintains policies and procedures to support these initiatives and has also established goals that suppliers are expected to join the company in achieving.

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

Number of suppliers	% of total spend (direct and indirect)	Comment
450	40%	250 suppliers represent approximately 50 percent of our direct material spend. 200 suppliers represent 20 percent of total spend. 40 percent is an estimated blend of the two types of suppliers.

CC14.4c

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

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	The Company is introducing its goals to the top suppliers by spend. The Company is setting the expectation that these suppliers comply with our transportation management programs, our disposable packaging waste requirements, our responsible mineral sourcing requirements, prohibited materials disclosures, and participate in energy/water management programs to reduce their consumption and costs. We give them the tools to meet our requirements and provide an email address (supplier.compliance@cummins.com) so that they may ask questions as necessary. In its requests for proposal, the company asks specifically if suppliers measure and trend GHG and about climate change strategy. 100 percent of global indirect suppliers are asked these questions. Cummins uses the answers to these questions as a measure of supplier maturity in this area and also to determine if any companies are candidates for assistance in reduction.

CC14.4d

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

Further Information

Module: Sign Off

Page: CC15. Sign Off

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
Tom Linebarger	Chairman and CEO	Board chairman

Further Information

CDP