

C0. Introduction

C0.1

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

FMC Corporation is a specialty company serving global agricultural, industrial and consumer markets by providing innovative solutions, applications and quality products for more than a century. On November 1, 2017 FMC acquired a significant portion of DuPont's Crop Protection business. FMC employs approximately 7,000 people throughout the world and operates its business in two segments: FMC Agricultural Solutions and FMC Lithium. FMC's 2017 revenue totaled approximately USD\$2.9 billion. Agricultural Solutions, 88% of FMC's total business by revenue, helps to meet the food and nutrient needs of a growing population. Agricultural Solutions provides innovative and cost-effective solutions to enhance crop yields and quality by controlling a broad spectrum of insects, weeds and diseases, and non-agricultural solutions for pest control. FMC Lithium, 12% of FMC's total business by revenue, produces low carbon products and technologies for energy storage, electric vehicle batteries, and energy efficient tires.

Sustainability is integrated into our innovation, operations, and business practices, which strengthens our business performance and aligns with our corporate strategy. FMC's progress in sustainability helps us to address some of the world's major global challenges. With our customers' use of our products and changes to our business operations, we are addressing five "major global challenges" that are among society's most profound concerns and have significant implications. They are: 1) Food & Health Expectations: Food and crop production must increase to meet the basic needs of a rapidly-growing population and socio-economically diverse population that seek a wider array of nutritional options, 2) Environmental Consciousness: Growing interest in natural and benign materials is driving the need for new, improved, bio-based products that reduce environmental impacts, 3) Climate Change: Reduction in greenhouse gas emissions is a necessary step in mitigating climate-warming trends, 4) Scarce Resources: To cope with limited availability of fresh water, energy, forests and other essential resources, we must carefully manage them and use more renewable alternatives, and 5) Land Competition: Urbanization to accommodate a growing population and poor land management techniques limit the amount of arable land available for agriculture, which intensifies the need to increase farmland productivity and crop yields. Each of these challenges shapes the way FMC does business. In 2018, FMC will take a focused approach to link the "major global challenges" with the United Nations Sustainable Development Goals (SDGs). This will include a detailed review of SDG #2 and #15, and their associated targets on which FMC can make a positive impact. FMC continues to make progress in sustainability with a 10-year strategy to grow by providing products with value, which motivate our stakeholders to work with FMC. In 2015, FMC established targets to ensure we are more sustainable enterprise through *Our Formula for Progress*. These targets include our 2020 Innovation & Business Practices Targets: 1) Reduce our Total Recordable Incident Rate (TRIR), a metric for reporting safety performance, to 0.3 or lower, 2) Increase our percent spending on R&D toward sustainably advantaged products to 80 percent, and 3) Achieve 100 on FMC's Community Engagement Index, which measures the extent and quality of our interaction with local communities. Our 2025 Operations Targets include: 1) Reduce our energy, greenhouse gas (GHG) emissions and waste intensities by 15 percent from our 2013 baseline year, and 2) Reduce our water use in high-risk areas by 20 percent from our 2013 baseline year. On November 1, 2017 FMC divested its Health and Nutrition business. Health and Nutrition significantly contributed to FMC's overall environmental impact for the majority of 2017. Therefore, its data through the third quarter has been included in FMC's assurance process and in FMC's 2018 CDP Climate Change report. The environmental data from FMC's newly acquired manufacturing sites has not been included.

FMC representatives may from time to time make written or oral statements that are "forward-looking" and provide other than historical information. Such statements are based on our current views and assumptions regarding future events, future business conditions and the outlook for FMC based on currently available information. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any results, levels of activity, performance or achievements expressed or implied by any forward-looking statement. We wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date made. References to "FMC" or "the company" refer to FMC Corporation.

C0.2

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

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

C0.3

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

- Argentina
- Australia
- Brazil
- Chile
- China
- Denmark
- Germany
- India
- Indonesia
- Italy
- Norway
- Pakistan
- Philippines
- Thailand
- United Kingdom of Great Britain and Northern Ireland
- United States of America

**C0.4**

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

USD

**C0.5**

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

Financial control

**C-CH0.7**

**(C-CH0.7) Which part of the chemicals value chain does your organization operate in?**

**Row 1**

- Bulk organic chemicals**  
Please select
- Bulk inorganic chemicals**  
Please select
- Other chemicals**  
Specialty chemicals

**C1. Governance**

**C1.1**

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

Yes

**C1.1a**

**(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Director on board	The highest level of responsibility for climate-related initiatives at FMC is the Chairman of the Board of Directors' Sustainability Committee, one of five of the Board of Directors' standing sub-committees. The Board of Directors established the Sustainability Committee and elected a Chairman as part of formalizing sustainability at FMC. This position is responsible for identifying sustainability initiatives, including potential climate-related issues and mitigation opportunities. The Board of Directors adopted a written charter outlining the Sustainability Committee's duties, which are: •Meeting three times per year •Conducting an annual self-assessment •Monitoring FMC's Sustainability Program, including program development and advancement, goals and objectives, and progress toward achieving those objectives •Monitoring FMC's environmental responsibility, employee occupational safety and health and process safety programs.

**C1.1b**

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding annual budgets</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The highest governance body responsible for climate-related initiatives at FMC is the Board of Directors’ Sustainability Committee. This committee was established when sustainability was formalized at FMC in 2011. The committee meets three times per year to review and direct sustainability programs and submit summary reports to the full Board of Directors. The Sustainability Committee of the Board of Directors (the “Committee”) is composed of five outside members of the Board, one of whom shall be Chairman. The Committee and its Chairman shall be nominated by the Nominating and Corporate Governance Committee, and elected annually at the organizational meeting of the Board. The Committee’s scope encompasses FMC’s safety, environmental and sustainability programs. It reviews these programs (objectives, plans, and performance) and recommended actions, as necessary, to ensure continuous performance improvement and alignment with constituent expectations (both internal and external). The Committee will also monitor program goals in light of market, environmental and social trends and expectations. The Committee’s scope includes, but is not limited to, the following areas: •Meeting three times per year •Conducting an annual self-assessment •Monitoring FMC’s Sustainability Program, including program development and advancement, goals and objectives, and progress toward achieving those objectives •Monitoring FMC’s environmental responsibility, employee occupational safety and health and process safety programs •Monitoring FMC’s programs with regard to the American Chemistry Council’s Responsible Care initiative. The Committee meets as scheduled by its Chairman, nominally three times per year in conjunction with the April, July and October meetings of the Board of Directors. Assisting the Committee is the Vice President, Global Procurement, Global Facilities and Corporate Sustainability, who will serve as the Committee’s executive secretary. The executive secretary prepares the agenda and reports to the Committee the result from the Committee’s inquiries and recommendations. S/he will also assist the Chairman in preparing reports to be submitted to the Board. The Committee conducts a self-assessment of its performance annually.</p>

**C1.2**

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.**

FMC’s Global Sustainability Director reports to the Vice President of Global Procurement, Global Facilities, and Corporate Sustainability, who is a member of FMC’s executive leadership and FMC’s internal Sustainability Steering Team (SST). The SST includes leaders of FMC Agricultural Solutions and Lithium as well as executive leaders from Manufacturing, EHS, R&D, Finance, Communications, Procurement, Human Resources, Legal and Government Affairs. The Global Sustainability Director oversees the implementation and integration of sustainability at FMC. This position communicates directly with the Board of Directors’ Sustainability Committee on sustainability and climate change three times a year and with the SST on a quarterly basis. The Global Sustainability Director collaborates with the Vice Presidents of Operations, Human Resources and R&D to develop and ensure the achievement of FMC’s 2020 and 2025 safety, environmental, innovation and social metrics and targets. Additionally, this individual manages the Global Sustainability Group, who collects, verifies and audits FMC’s metrics for innovation, business practices, and environment (energy, water, greenhouse gas emissions, waste). The Global Sustainability Group works cross-functionally to monitor the implementation of FMC’s sustainability initiatives globally.

**C1.3**

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

Yes

**C1.3a**

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

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

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

FMC's executive officers and vice presidents, including those who are members of FMC's executive team, are eligible for non-monetary incentives, like recognition, as well as monetary incentives when they include sustainability-related targets, like greenhouse gas emissions and energy reductions, in their annual performance indicators. For example, Director of Global Operations for FMC Lithium, has included the management and accomplishment of FMC Lithium's sustainability targets as a performance indicator in her annual performance goals. The Director of Global Operations for FMC Agricultural Solutions has included the management and accomplishment of FMC Agricultural Solutions' sustainability metrics in his goals. FMC Agricultural Solutions and FMC Lithium have both committed to developing business-specific targets that will contribute to FMC's corporate 2025 sustainability targets to reduce energy, greenhouse gas emissions, and waste intensities by 15 percent as well as to reduce water use in high-risk areas by 20 percent.

---

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

Environment/Sustainability manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

FMC's Global Sustainability Director, has incentives for the management of climate change-related issues within her annual performance indicators. She was responsible for the completion of the pre-assurance process in 2015 and third-party assurance of FMC's environmental data since 2015. FMC's Sustainability Group collects FMC's energy and greenhouse gas data to monitor and track FMC's progress on its environmental targets, including the goal to reduce FMC's energy and greenhouse gas intensities by 15% by 2025.

---

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

All employees

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Behavior change related indicator

**Comment**

FMC's President's Awards recognize exceptional performance and/or improvement of a plant location, laboratory, business unit or staff functional department within a Group/Business or a Corporate Staff function in the areas of EHS and Sustainability.

---

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

All employees

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Behavior change related indicator

**Comment**

FMC's Chairman's Award recognizes employees or small groups for outstanding achievements and leadership in the areas of EHS and Sustainability.

---

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

All employees

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Other, please specify (Employee Engagement)

**Comment**

FMC's Global Sustainability Group has produced a sustainability blog, Sustainability + You, which is featured on FMC's sustainability website. The goal of the blog is to inform and engage FMC's international workforce on programs and initiatives related to sustainability at FMC. Employees and stakeholders can submit information to the Global Sustainability Group on how they are creating a more sustainable future within and outside of FMC.

---

**C2. Risks and opportunities**

---

**C2.1**

---

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

	From (years)	To (years)	Comment
Short-term	0	1	
Medium-term	1	3	
Long-term	3	20	

**C2.2**

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

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

**C2.2a**

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	Up to 1 year	FMC's Enterprise Risk Management Group conducts a company-wide enterprise risk assessment to reduce FMC's exposure to risk factors, which are generally disclosed in our 10-K. The assessment process includes engaging with FMC business functions globally on many issues, including risks and opportunities associated with climate change. Findings from this assessment are reported to the Risk Council, FMC's executive leadership and Board of Directors three times a year, and includes factors like climate change, GHG emissions, food supply, resource efficiency, product environmental impact, and health and safety.

**C2.2b**

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

At a company level, FMC's Risk Council, Risk Management and Sustainability Group interact with FMC locations and functions on many issues, which can include climate change risks and opportunities. The Risk Council includes FMC executive leadership and is responsible for ensuring good risk governance, defining strategic risks, and monitoring risk assessment processes in strategic planning, business planning, capital planning and M&A. The Sustainability Group conducts an annual materiality assessment that quantitatively and qualitatively analyzes material issues. They conduct interviews with employees with a deep understanding of our business from Sustainability, Government Affairs, Internal Audit, Investor Relations, Communications, Finance, Legal, Operations, Safety and Environment/Remediation. They also conduct a survey asking internal and external stakeholders to rank sustainability issues based on each issue's perceived impact on and importance to FMC. The 2017 survey had 51 respondents, representing non-government organizations, customers, suppliers, foundations, trade associations and employees. The most material issues were reported to FMC's executive leadership team, Sustainability Steering Committee, Board Sustainability Team and in our Sustainability Report.

The Sustainability Group manages the company's energy consumption, GHG emissions, water use and waste generation data. FMC obtained third-party assurance on its 2015, 2016 and 2017 data. FMC's sites collect and report this data to the Sustainability Group, ensuring FMC is able to measure its environmental impact. The Sustainability Group conducts water risk assessments, energy audits and social responsibility audits at FMC facilities and results are applied at other sites as needed. A cross-functional materiality team identified 62 sustainability issues relevant to FMC that fell into 5 categories: Operations, Workplace, Environment, Marketplace, and Community. Internal stakeholders scored each issue on 5 factors: financial impact and risk, regulatory and policy drivers, peer-based norms, stakeholder concerns and societal trends and opportunities for innovation. External stakeholders scored each issue based on perceived importance to FMC. An issue that scores high on internal and external surveys is considered a material issue of high importance; high scoring issues are prioritized and considered for more research and/or stakeholder alignment. These surveys and stakeholder interviews inform our sustainability priorities, strategies, and reporting. The most material issues are reported in FMC's sustainability report. Among the high material issues reported in the 2017 Sustainability Report are climate change, energy use, water use and waste.

On an asset level, Risk Management conducts an annual risk assessment for our manufacturing sites and physical assets. It has a review process for potential natural catastrophes and possible sources of risks, which are generally disclosed in our 10-K. The Risk Management process has an Enterprise Risk Assessment component, which includes interviews of FMC's top leaders annually. FMC assesses risks using impact and likelihood definitions as previously defined by the Risk Council to arrive at "enterprise" level risks, those estimated to have a financial impact of \$50 million or more of EBIT. Based on this initial assessment, a preliminary report is presented to the Risk Council. After incorporating the Risk Council's input, enterprise risks are validated and the top risks prioritized in facilitated workshops with risk owners. These facilitated workshops use voting technology to find greater consensus on key risk impact, likelihood and owner. The final results are reported to the executive committee and Board each year.

**C2.2c**

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The global regulatory environment is becoming increasingly complex and may increase the potential for misunderstanding or misapplication of regulatory standards. FMC is allocating more resources to effectively manage changes in the global regulatory environment. Some of our manufacturing processes and customers are subject to regulation by the US Food and Drug Administration (FDA) or similar foreign agencies. Regulatory requirements of the FDA are complex, and any failure to comply with them including as a result of contamination due to acts of sabotage could subject us and/or our customers to fines, injunctions, civil penalties, lawsuits, recall or seizure of products, total or partial suspension of production, denial of government approvals, withdrawal of marketing approvals and criminal prosecution. Any of these actions could adversely impact our net sales, undermine goodwill established with our customers, damage commercial prospects for our products and materially adversely affect our results of operations. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Emerging regulation	Relevant, always included	Changes in the regulatory environment, particularly in the United States, Brazil, China, Argentina and the European Union, could adversely impact FMC's ability to continue producing and/or selling certain products in our domestic and foreign markets or could increase the cost of doing so. Our Agricultural Solutions business is most sensitive to this general regulatory risk, given our need to obtain and maintain pesticide registrations in every country in which we sell our products. Many countries require re-registration of pesticides to meet new and more challenging requirements. While we defend our products vigorously, the re-registration processes may result in significant additional data costs, reduced number of permitted product uses, or potential product cancellation. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Technology	Relevant, always included	FMC's ability to compete successfully depends in part upon our ability to maintain superior technological capabilities and to continue to identify, develop and commercialize new and innovative, high value-added products for existing and future customers. Our investment in the discovery and development of new pesticidal active ingredients for FMC Agricultural Solutions relies on discovery of new chemical molecules. Such discovery processes depend on our scientists' ability to find new molecules, which are novel and outside of patents held by others. Newly discovered molecules must meet any applicable regulatory criteria, efficacious against target pests, and not create undue risks to human health and the environment. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Legal	Relevant, always included	FMC is subject to extensive federal, state, local and foreign environmental and safety laws, regulations, directives, rules and ordinances concerning, emissions in the air, discharges to land and water, and the generation, handling, treatment, disposal and remediation of hazardous waste and other materials. We may face liability arising out of normal course of business, which could include alleged personal injury or property damage due to exposure to chemicals that we manufacture, handle or own. We take our environmental responsibilities very seriously, but there is a risk of environmental impact inherent in our manufacturing operations and transportation of chemicals. Any substantial liability for environmental damage could have a material adverse effect on our financial condition, results of operations and cash flow. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Market	Relevant, always included	FMC's operating results could be significantly affected by the cost of commodities, including raw materials. We may not be able to raise prices on our products or improve productivity sufficiently to offset future increases in commodity pricing. Additionally, fluctuations in commodity prices could negatively impact our customers' ability to sell their products at previously forecasted prices, resulting in reduced liquidity amongst our customers. Inadequate liquidity of our customers could affect their ability to pay for our products and affect existing and future sales or our ability to collect on customer receivables. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Reputation	Relevant, always included	FMC continuously evaluates the diversity of our portfolio in light of our objectives and alignment with our growth strategy. In implementing this strategy, we may not be successful in separating underperforming or non-strategic assets. The gains or losses on the divestiture of, or lost operating income from, such assets (e.g., divesting) may affect the company's earnings. Moreover, we may incur asset impairment charges related to acquisitions or divestitures that reduce earnings. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Acute physical	Relevant, sometimes included	Adverse weather conditions can impact FMC's ability to extract lithium efficiently from our lithium reserves in Argentina. Natural disasters can impact production at our facilities in various locations around the world. The nature of these events makes their impact difficult to predict on FMC. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Chronic physical	Relevant, sometimes included	According to the U.S. Global Change Research Program's National Climate Assessment, climate change is projected to cause many changes in physical climate parameters. These include increases in extreme weather events as well as changes in sea levels, mean temperatures, precipitation levels and precipitation patterns. The interaction of these physical parameters could have significant impacts on natural resources in the locations in which FMC operates. Several FMC properties are at or near sea level. Dramatic changes in sea levels and more intense storm surges could cause a need to protect both these natural resources and FMC properties from storm surges and flooding. FMC is examining options to protect our resources and sites close to sea level against sea level changes and stronger storm surges, like at our Ronland, Denmark site plans to strengthen its dike system. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Upstream	Relevant, always included	Certain raw materials are critical to our production processes. While we have made supply arrangements to meet planned operating requirements, an inability to obtain the critical raw materials or operate under contract manufacturing arrangements would adversely impact our ability to produce certain products. We increasingly source critical intermediates and finished products from a number of suppliers, largely outside of the United States and principally in China. An inability to obtain these products or execute under contract sourcing arrangements would adversely impact our ability to sell products. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.
Downstream	Relevant, sometimes included	Fluctuations in commodity prices could negatively impact our customers' ability to sell their products at previously forecasted prices, resulting in reduced customer liquidity. Inadequate customer liquidity could affect our customers' ability to purchase for our products and, affect existing and future sales or our ability to collect on customer receivables. The evaluation of this risk is included in the Enterprise Risk Management annual risk assessment process.

**C2.2d**

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

Through FMC's Enterprise Risk Assessment process, which includes interviews and facilitated workshops, enterprise risks are validated and the top risks prioritized with risk owners. The risk owners are responsible for developing an action plan to address and mitigate the identified risks. Results from the Risk Assessment are presented to the Risk Council, the executive committee and the Board each year. One such example of risk identified as part of this assessment includes having operations subject to the European Union (EU) Emission Trading Scheme (ETS), which has a goal to reduce greenhouse gas emissions by 43 percent by 2030 from 2005 emission levels. FMC's Ronland, Denmark plant is subject to the EU ETS and is below Phase III's emissions cap. FMC continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. FMC has also set an overall 15 percent energy intensity reduction goal. By reducing our emissions of greenhouse gases and investing in energy and process efficient equipment for our manufacturing facilities for 2025, we lessen the likelihood of a material risk from greenhouse gas legislation. Furthermore, climate change and its impacts have the potential to induce changes in customer preferences for products and/or services. People are increasingly concerned about the environment and the impact that companies' products and operations have on the environment. In response, we are developing sustainably advantaged products and technologies to help address consumers' increasing interest in agricultural products that are less impactful on the environment. We set a goal in 2020 to increase our R&D spending on developing sustainably advantaged products to 80 percent, in 2017 we surpassed this goal achieving 82 percent of spend on sustainably advantaged products.

**C2.3**

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

Yes

**C2.3a**

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

**Identifier**

Risk 1

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Enhanced emissions-reporting obligations

**Type of financial impact driver**

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

**Company- specific description**

FMC is currently subject to the European Union (EU) Emission Trading Scheme (ETS), which has a goal to reduce greenhouse gas emissions by 43 percent by 2030 from 2005 emission levels. Started in 2005, the EU ETS was designed to be implemented in a series of four phases. The third phase (2013-2020) of the EU ETS is currently in effect and the emissions allowances decline by 1.74 percent annually. As of now, each member nation participating in the EU ETS sets the cap and distributes free emissions allowances. FMC's Ronland, Denmark plant is subject to the EU ETS and is below Phase III's emissions cap. In 2021, Phase IV of the EU ETS will come into effect and allowances will decrease by 2.2 percent annually from 2021 to 2030. Our Ronland, Denmark plant will continue to be subject to the EU ETS and the new emissions limits in Phase IV may increase costs at this plant, depending on the new EU-wide emissions cap and the cost of procuring allowances. Additionally, China is in the process of expanding the implementation of the country's cap and trade program across the country in order to limit emissions. General environmental regulations in China and the country's cap-and-trade program are designed to improve air quality and the environment and they are quickly becoming more prevalent throughout the country. FMC realizes the potential impacts on the company's operations due to government's recent increased focus on improving the country's environmental conditions. Environmental regulations have the potential to increase the costs of active ingredient contract manufacturing companies that produce our active ingredients. Depending on how additional countries implement cap and trade in the long-term, FMC could potentially need to increase capital investment in emission reduction technology to reduce its GHG emissions.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Low

**Potential financial impact****Explanation of financial impact**

The potential impacts of proposed or established cap and trade schemes on different FMC locations around the world are similar. Requirements of cap and trade schemes may result in increased costs of energy, increased costs for purchasing emissions allowances, and additional capital costs for emissions controls or new equipment. At this point in time, our plant in Denmark is below the EU ETS designated emissions cap for the EU ETS Phase III. The potential financial implications of complying with a lower cap will be determined as the Phase IV of the EU ETS is finalized in 2021. Each member country of the EU ETS sets the emissions cap and the price of allowances. Depending on the yet-to-be determined requirements of cap-and-trade schemes of the EU ETS's Phase IV and China's cap-and-trade scheme, a percentage of FMC's revenues in EMEA (\$584.4 million) and Asia Pacific (\$718.5 million) could be impacted.

**Management method**

FMC continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. FMC has also set an overall 15 percent energy intensity reduction goal. By reducing our emissions of greenhouse gases and investing in energy and process efficient equipment for our manufacturing facilities for 2025, we lessen the likelihood of a material risk from greenhouse gas legislation. FMC has and will continue to implement energy and process efficiency projects to reduce our energy consumption and GHG emission generation. FMC has a dedicated budget for process improvements at its established Technical Centers, which conduct research in energy efficiency and emissions reductions activities. The Technical Centers perform energy audits and process improvement at FMC facilities and findings from these audits are implemented at other FMC locations as needed. FMC's total annual investment in the technical centers can range, from approximately \$30 to \$35 million.

**Cost of management****Comment****Identifier**

Risk 2

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

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Chronic: Rising mean temperatures

**Type of financial impact driver**

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

**Company- specific description**

According to the U.S. Global Change Research Program's National Climate Assessment, climate change is projected to cause many changes in physical climate parameters. These include increases in extreme weather events as well as changes in sea levels, mean temperatures, precipitation levels and precipitation patterns. The interaction of these physical parameters could have significant impacts on natural resources in the locations in which FMC operates. Several FMC properties are at or near sea level. Dramatic changes in sea levels and more intense storm surges could cause a need to protect both these natural resources and FMC properties from storm surges and flooding. FMC Lithium faces some risk with induced changes in natural resources. Changes in mean temperature have the potential to increase water scarcity in many parts of the world, and our raw materials sourcing operation depends on access to water. Induced changes in natural resources from climate change could increase the risk of disruptions in production capacity. FMC Lithium could experience increased costs in sourcing its raw materials as we take steps to mitigate this risk.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Potential financial impact****Explanation of financial impact**

As noted in the International Panel on Climate Change Fifth Assessment Report, quantitative estimates to measure the private costs of climate change may be incomplete due to difficulty in measuring all relevant effects over time. FMC could experience higher costs with adapting to sea level rise, storm surges, rise in mean temperatures and changes in natural resources as we will need to fortify our sites near sea level. The percentage of Agricultural Solutions' and Lithium's revenue that would be impacted would depend on the severity of changes in natural resources. (Agricultural Solutions' 2017 revenue was USD\$2531.2 million and Lithium's 2017 revenue was USD\$347.4 million.)

**Management method**

FMC is examining options to protect our resources and sites close to sea level against sea level changes and stronger storm surges, like at our Ronland, Denmark site plans to strengthen its dike system. To mitigate potential risks to water quality and supply, we first conducted a Water Risk Assessment in 2013 that compared our sites' water use with the World Resources Institute's Aqueduct™ water mapping tool. A Lithium site in Minera del Altiplano, Argentina indicated a need to better understand potential future water instability. We modeled the system to develop conservancy and contingency strategies to ensure long-term water availability. In 2015, we updated the assessment and created a 2025 goal to reduce water use in water scarce areas by 20 percent from our 2013 baseline. Additionally, FMC has allocated over 82% of its 2017 R&D spend on developing sustainably advantaged products, which are products that address global challenges like climate concerns, scarce resources, food and health expectations, land competition or environmental consciousness. FMC can impact these challenges with our products and technologies as well as by decreasing our operations' environmental footprint. We have surpassed our 2020 goal to increase the percentage of our R&D spend to 80 percent or more on developing sustainably advantaged products.

**Cost of management****Comment****Identifier**

Risk 3

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

Customer

**Risk type**

Physical risk

**Primary climate-related risk driver**

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

**Type of financial impact driver**

Reduced revenues from lower sales/output

**Company- specific description**

Induced changes in natural resources could be both a risk and an opportunity for FMC's Agricultural Solutions business depending on the geographic location and the severity of climate change impacts on our customers. The National Climate Assessment projects that growers in many regions will face impacts on crop yields and livestock development because of changes in growing seasons, insect vectors and species distributions due to increasing extreme weather, changing mean temperatures, precipitation patterns and mean precipitation levels. FMC Agricultural Solutions develops agricultural products and technologies to help growers combat the effects of these changes on their crops and we could experience greater market uncertainty because an increase in unpredictable growing conditions would negatively affect our customers. The severity and extent of induced changes in natural resources would affect our customers and in turn, it could affect their need for our products and technologies. Agricultural Solutions could experience a decrease in demand if our products and technologies do not align with the solutions that growers need.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Potential financial impact****Explanation of financial impact**

As noted in the International Panel on Climate Change Fifth Assessment Report, quantitative estimates measuring private costs of climate change may be incomplete due to the difficulty in measuring all relevant effects over time. FMC Agricultural Solutions could be impacted by changes in natural resources. If impacts on growers are significant and FMC did not have products in the market to address these impacts, then it could be a material risk to our business. The financial impact on our Agricultural Solutions and our customers is difficult to project at this point in time because of the difficulty in estimating the potential costs to our growers in different geographic locations, in what time frame and the severity of impacts. The percentage of Agricultural Solutions' revenue that would be impacted would depend on the severity of the changes in natural resources. (Agricultural Solutions' 2017 revenue was \$2.5 billion.)

**Management method**

FMC Agricultural Solutions helps growers increase crop yields in areas impacted by changes in physical parameters by supplying insecticides for insect control, herbicides for weed control in crops and soil, fungicides for disease control and biologicals, which are materials originating from renewable plant or natural microbial sources. FMC's biologicals have a lower environmental impact and can increase crop yields by up to 9.5 bushels per acre of corn compared to yields from untreated fields. FMC has developed 3RIVE 3DTM, which helps to meet the challenge of feeding the world's growing population with its efficient method of applying crop protection products during planting. FMC continues to expand uses of the commercial on-planter application technology that minimizes labor, water use and fuel use. The patent-pending formulation and delivery system uses small amounts of water and expands the product three-dimensionally to cover 50 times more area than traditional formulations. It allows growers to plant and protect up to 500 acres on a single fill-up of the system and use 90 percent less water than traditional liquid delivery systems. FMC is formulating and testing active ingredients with this technology, including biological products. FMC allocated 82 percent of its 2017 R&D spend on developing sustainably advantaged products, which address global challenges like climate change, scarce resources, land competition, environmental consciousness and food & health expectations.

**Cost of management****Comment**



**Identifier**

Risk 4

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

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Market: Changing customer behavior

**Type of financial impact driver**

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

**Company- specific description**

Climate change and its impacts have the potential to induce changes in customer preferences for products and/or services. People are increasingly concerned about the environment and the impact that companies' products and operations have on the environment. In the future, some consumers' preferences could change, and they could prefer to support products, technologies and companies that they perceive as "friendlier" and/or less impactful on the environment. These potential changes in consumer preferences would have an impact on all industries and the chemical sector. An example of conceivable changing consumer preference relates to agricultural livestock production, which currently accounts for approximately 15 percent of gross global greenhouse gas emissions. As some consumers become more concerned about the environment, they could decrease their consumption of meat to lessen their individual impact on the environment and climate change. As a result, FMC's customers could experience a decreased demand for livestock, leading to a decreased demand for FMC's agricultural products used to grow animal feed from corn and soybeans. Depending on the extent to which consumers and our customers' preferences change and our ability to adapt our portfolio to these changing preferences, our product sales and revenue could be impacted.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Potential financial impact****Explanation of financial impact**

The potential risks associated with changing consumer behavior depend on the time frame and extent to which consumers decide to switch to products they perceive as "greener" or more "climate-friendly" because of increased concern for society's negative impacts on the environment. The financial impacts on FMC will also depend on our product portfolio and our ability to adapt our products with changing consumer behavior. The actual financial implications are difficult to quantify and could change over time. The risk of changing consumer behavior has the potential to impact a percentage of FMC's sales of its Agricultural Solutions products, which was \$2.5 billion in 2017. Losses in product sales could be compensated by increased sales of our sustainably advantaged products, including biologicals and technologies.

**Management method**

The cost of managing changing consumer behavior is difficult to predict and quantify over time to include in an overall strategy. We do track changes affecting customer preferences and are conscious of changing consumer preferences due to climate change and its impacts. In response, we are also developing sustainably advantaged products and technologies to help address consumers' increasing interest in agricultural products that are less impactful on the environment and support the transition to a low-carbon economy with increased demand for lithium battery technology. We increased our R&D spending on developing sustainably advantaged products to 82 percent in 2017, surpassing our 2020 goal to increase our R&D spending to 80 percent, so we can address potential market and other-climate related developments, including changing consumer behavior.

**Cost of management****Comment**

## C2.4

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

Yes

## C2.4a

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

Opp1

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

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of supportive policy incentives

**Type of financial impact driver**

Increased capital availability (e.g., as more investors favor lower-emissions producers)

**Company- specific description**

FMC supports legislation that provides incentives for the development of renewable energy storage. The Paris climate agreement signed at the COP21 Conference was

highly significant because companies and 195 countries pledged that by 2050, they will decrease their greenhouse gas emissions to limit the rise in global temperatures to 2 degrees Celsius from 1990 global emissions' levels. In order to do so, energy storage will be needed to hold excess supplies of energy generated by renewable and nuclear sources. Stored energy can be used to cover the intermittent-nature of renewable sources, short-term demand spikes, and peak demand times. Legislation supporting research and development of energy storage, in particular lithium-based energy storage, would not only provide an opportunity for FMC Lithium, but also encourage the transition to renewable sources, thereby reducing climate change.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-low

**Potential financial impact**

**Explanation of financial impact**

As more countries around the world and states make plans to reduce their carbon emissions, it is likely that additional legislation will be enacted to encourage consumers to purchase fuel-efficient and electric vehicles. For example, the state of California is often at the forefront of legislation to reduce climate change. California has the Clean Vehicle Rebate Project, which is an incentive program that offers California residents up to \$6,500 for the purchase of new, eligible zero-emission or plug-in hybrid light-duty vehicles. There are potential regulations that could benefit FMC Lithium in the 1 to 3-year time frame as well as more potential regulations beyond 3 years. Consumers' increasing preference for electric vehicles (EV) in addition to incentive programs has the potential to increase FMC's Lithium's lithium hydroxide sales. At FMC, we believe demand for lithium will grow more than 10 percent every year throughout the next decade.

**Strategy to realize opportunity**

FMC is a long-time leader in lithium research and innovation. We are working on the challenge of developing lithium products and applications that improve battery performance. We are currently researching new applications of our lithium products in a range of industries. FMC is the only producer of high-purity lithium metal in the Western Hemisphere. It is used in lithium-aluminum alloys that strengthen an aircraft's fuselage while also reducing its weight. Light-weight materials enable an aircraft to be more fuel efficient. Our battery grade lithium is used in electric vehicles and residential energy storage power packs, which can also be used to support the adoption of renewable energy sources. Over the next several years, FMC will increase its production capacity of lithium hydroxide by a total of 20,000 metric tons per year, in response to the strong demand for FMC's battery grade lithium hydroxide. FMC has committed to increasing the percentage of R&D spending on developing sustainably advantaged products to 80 percent by 2020. In 2017, we surpassed this goal by investing 82 percent of our R&D budget towards sustainable product innovation. Our strategic position depends on our sustainable investments that ensure our company runs more efficiently and resiliently by 2025. The cost of management of this regulatory opportunity driver is currently factored into our business strategy.

**Cost to realize opportunity**

**Comment**

---

**Identifier**

Opp2

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

Customer

**Opportunity type**

Markets

**Primary climate-related opportunity driver**

Access to new markets

**Type of financial impact driver**

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

**Company- specific description**

Climate change is predicted to cause more extreme weather conditions as well as changing temperatures, precipitation patterns and mean precipitation levels. The National Climate Assessment projects that due to these climate-related changes, growers in many regions of the world will face potential impacts on crop yields and livestock development because of changes in growing seasons, diseases, weeds, insect vectors and species distributions. At the same time, growers will need to produce more food and increase their crop yields to support global population growth of approximately 75 million people per year. FMC Agricultural Solutions provides products and technologies that increase crop yields and/or water efficiency, which will help to reduce the effects of climate change on growers and support them in meeting increasing food demand. Agricultural Solutions will continue to develop agricultural products and technologies designed to help growers combat the effects of climate-related changes on their crops. Depending on how pervasive the effects are in different geographic locations experiencing changes in natural resources, FMC's customers could be significantly impacted. FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans and corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-low

**Potential financial impact**

**Explanation of financial impact**

As more countries around the world and states make plans to reduce their carbon emissions, it is likely that additional legislation will be enacted to encourage consumers to purchase fuel-efficient and electric vehicles. For example, the state of California is often at the forefront of legislation to reduce climate change. California has the Clean Vehicle Rebate Project, which is an incentive program that offers California residents up to \$6,500 for the purchase of new, eligible zero-emission or plug-in hybrid light-duty vehicles. There are potential regulations that could benefit FMC Lithium in the 1 to 3-year time frame as well as more potential regulations beyond 3 years. Consumers' increasing preference for electric vehicles (EV) in addition to incentive programs has the potential to increase FMC's Lithium's lithium hydroxide sales. At FMC, we believe demand for lithium will grow more than 10 percent every year throughout the next decade.

**Strategy to realize opportunity**

FMC is a long-time leader in lithium research and innovation. We are working on the challenge of developing lithium products and applications that improve battery

performance. We are currently researching new applications of our lithium products in a range of industries. FMC is the only producer of high-purity lithium metal in the Western Hemisphere. It is used in lithium-aluminum alloys that strengthen an aircraft's fuselage while also reducing its weight. Light-weight materials enable an aircraft to be more fuel efficient. Our battery grade lithium is used in electric vehicles and residential energy storage power packs, which can also be used to support the adoption of renewable energy sources. Over the next several years, FMC will increase its production capacity of lithium hydroxide by a total of 20,000 metric tons per year, in response to the strong demand for FMC's battery grade lithium hydroxide. FMC has committed to increasing the percentage of R&D spending on developing sustainably advantaged products to 80 percent by 2020. In 2017, we surpassed this goal by investing 82 percent of our R&D budget towards sustainable product innovation. Our strategic position depends on our sustainable investments that ensure our company runs more efficiently and resiliently by 2025. The cost of management of this regulatory opportunity driver is currently factored into our business strategy.

#### Cost to realize opportunity

#### Comment

---

#### Identifier

Opp3

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

Direct operations

#### Opportunity type

Products and services

#### Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

#### Type of financial impact driver

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

#### Company- specific description

As people become more aware of product impacts on the environment, they are demanding more natural and benign materials to reduce individuals' impacts on the environment. Changing consumer behavior presents an opportunity for FMC to develop products that are less impactful on the environment and/or products with a low-carbon life cycle. Growers prefer agricultural products with a lighter environmental footprint and ones that reduce labor, time, water, fuel use and GHG emissions. FMC Agricultural Solutions has a potential opportunity to provide products that fulfill these consumer preferences. Consumers are likely to become more concerned about how negative environmental impacts affect their health and wellbeing on a personal level. As a result, they are likely to choose natural products that they perceive as better for the health of the environment and for their personal health. Climate change and environmental responsibility is one of the leading global concerns today. In 2015, governments worldwide signed the Paris climate agreement at the United Nations' COP21 Conference. They agreed that fossil fuel consumption and greenhouse gas emissions must be reduced. FMC Lithium addresses these needs by supplying lithium products that can be used in energy-efficient solutions that reduce climate change.

#### Time horizon

Medium-term

#### Likelihood

Likely

#### Magnitude of impact

Medium

#### Potential financial impact

#### Explanation of financial impact

The potential opportunities associated with changing consumer behavior will depend on the timeframe and extent to which consumers decide to switch to products they perceive as "greener" or more "climate-friendly" out of increased concern for society's negative impacts on the environment. How FMC will benefit from these opportunities financially will depend on our ability to adapt our products with consumers' changing behavior. As noted in the IPCC's Fifth Assessment Report, quantitative estimates measuring the financial impact of climate change on companies may be incomplete because of difficulties in measuring all relevant climate-change effects over time. More dramatic climate-change effects in the short-term could accelerate consumers' preference for FMC's sustainably advantaged products and technologies.

#### Strategy to realize opportunity

FMC is actively addressing major global challenges like climate change, scarce resources, land competition, food and health expectations and environmental consciousness. In 2017, we have dedicated 82 percent of our R&D spend to developing sustainably advantaged products and technologies. A sustainably advantaged product addresses the previously mentioned major global challenges. By addressing these challenges in our R&D spend for developing sustainably advantaged products and technologies, we are better able to address potential market and other-climate related developments, including changing consumer behavior. The cost of these R&D programs has already been incorporated into our business strategy. FMC Agricultural Solutions helps address growers' need for products with a lighter environmental footprint in our biologicals products. One product can increase corn yields by up to 9.5 bushels per acre compared to yields from untreated fields and our crop protection technologies like 3RIVE 3D™ significantly reduce labor, time, water, fuel use and GHG emissions in planting operations. FMC Lithium develops lithium products for improved battery performance. We provide lithium to the aluminum industry for lithium aluminum alloys used in lighter weight aircraft and aerospace applications. Our battery grade lithium is used in electric vehicles and residential energy storage power packs.

#### Cost to realize opportunity

#### Comment

---

## C2.5

---

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

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	FMC is a long-time leader in lithium research and innovation. We are working on the challenge of developing lithium products and applications that improve battery performance. We are currently researching new applications of our lithium products in a range of industries. FMC is the only producer of high-purity lithium metal in the Western Hemisphere. It is used in lithium-aluminum alloys that strengthen an aircraft's fuselage while also reducing its weight. Light-weight materials enable an aircraft to be more fuel efficient. Our battery grade lithium is used in electric vehicles and residential energy storage power packs, which can also be used to support the adoption of renewable energy sources. Over the next several years, FMC will increase its production capacity of lithium hydroxide by a total of 20,000 metric tons per year, in response to the strong demand for FMC's battery grade lithium hydroxide.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	We have made supply arrangements to meet planned operating requirements because an inability to obtain the critical raw materials or operate under contract manufacturing arrangements could adversely impact our ability to produce certain products. We are increasingly sourcing critical intermediates and finished products from a number of suppliers, largely outside the United States and principally in China.
Adaptation and mitigation activities	Impacted	FMC is examining options to protect our resources and sites close to sea level against sea level changes and stronger storm surges. Our Ronland, Denmark site plans to strengthen its dike system. To mitigate potential risks to water quality and supply, we first conducted a Water Risk Assessment in 2013 that compared our sites' water use with the World Resources Institute's Aqueeduct™ water mapping tool. A Lithium site in Minera del Altiplano, Argentina indicated a need to better understand potential future water instability. We modeled the system to develop conservancy and contingency strategies to ensure long-term water availability. In 2015, we updated the assessment and created a 2025 goal to reduce water use in water scarce areas by 20 percent from our 2013 baseline.
Investment in R&D	Impacted	FMC allocated 82 percent of its 2017 R&D spend on developing sustainably advantaged products, which address global challenges like climate change, scarce resources, land competition, environmental consciousness and food and health expectations. FMC can impact these challenges by decreasing our operations' environmental footprint and by providing customers with our products and technologies to mitigate and adapt to impacts from climate change. We are managing the risk of induced changes in natural resources by setting a 2020 goal to increase the percentage of our R&D spending to 80 percent or more on developing sustainably advantaged products. We have surpassed this goal three years ahead of the deadline.
Operations	Impacted	One way we are managing our risk is through our 2025 goals to reduce our energy, GHG and waste intensities by 15 percent and our water use intensity by 20 percent in water scarce areas. FMC Agricultural Solutions' manufacturing sites invested in energy efficient equipment improvements reducing absolute energy use by 18 percent and energy intensity by 13 percent since the 2013 baseline. These energy efficiency improvements reduced absolute GHG emissions by 9 percent and GHG intensity by 4 percent compared to the 2013 baseline. Through a strong focus on improving energy efficiency, FMC Lithium's manufacturing sites increased production by 21 percent while only increasing absolute energy use by 2 percent. This achievement means that we reduced FMC Lithium energy intensity by 16 percent since the 2013 baseline year. The significant energy efficiency improvements combined with the completion of a natural gas pipeline to supply the Minera del Altiplano, Argentina site has resulted in the Lithium business reducing absolute GHG emissions by 2 percent and reducing GHG intensity by 19 percent compared to the 2013 baseline.
Other, please specify	Please select	

**C2.6**

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

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	FMC utilizes a cross-functional team as part of the financial planning process to provide insight into changing market conditions, research and development, and short-, medium- and long-term business strategy. This team is responsible for preparing monthly forecasts, quarterly updates, annual budgets and long-term financial planning. Long-term financial planning, greater than 5 years, takes into account many factors, including risk and opportunities related to climate change. Climate change is predicted to cause more extreme weather conditions as well as changing temperatures, precipitation patterns and mean precipitation levels. The National Climate Assessment projects that due to these climate-related changes, growers in many regions of the world will face potential impacts on crop yields and livestock development because of changes in growing seasons, diseases, weeds, insect vectors and species distributions. FMC Agricultural Solutions provides products and technologies that increase crop yields and/or water efficiency, which will help to reduce the effects of climate change on growers and support them in meeting increasing food demand. Depending on how pervasive the effects are in different geographic locations experiencing changes in natural resources, FMC's customers could be significantly impacted. FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans and corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions.
Operating costs	Impacted for some suppliers, facilities, or product lines	FMC's operating results could be significantly affected by the cost of commodities, including raw materials. We may not be able to raise prices or improve productivity sufficiently to offset future increases in commodity pricing. Fluctuations in commodity prices could negatively impact our customers' ability sell their products at previously forecasted prices resulting in reduced customer liquidity. Inadequate customer liquidity could affect our customers' abilities to pay for our products and, therefore, affect existing and future sales or our ability to collect customer receivables.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	The global lithium industry is growing at an unprecedented rate, driven mostly by the ongoing adoption of hybrid and electric vehicles. In 2017, FMC Lithium expanded capacity in multiple locations, including a new lithium hydroxide plant in China that is producing 9,000 metric tons per year to meet accelerating demand for FMC's products. We announced additional production investments that will add another 12,000 metric tons per year of lithium hydroxide capacity. To feed these downstream products, we announced plans to more than double lithium carbonate production at our Argentina sites, from 18,000 metric tons per year to more than 40,000 metric tons per year by 2022. These projects require significant capital, which is considered during the financial planning process, but risk remains if sufficient cash flow or external financing is not adequate to meet the needs of the project.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	FMC is separating FMC Lithium business at the same time as integrating the DuPont assets into FMC Agricultural Solutions as well as implement other major initiatives such as the migration to a single global instance of SAP S4 HANA , a business suite that is built on SAP's proprietary operational database system and in-memory computing platform called SAP HANA. These three projects will place significant demands on certain functions who are heavily involved in all three projects, particularly finance and information technology. Failure to successfully execute such projects could materially and adversely affect our expected performance in FMC Agricultural Solutions and/or FMC Lithium.
Access to capital	Impacted for some suppliers, facilities, or product lines	With the acquisition of DuPont Crop Protection assets and the planned continued expansion of FMC's Lithium business, our business is more capital intensive than it has been historically. FMC relies on cash generated from sales and external financing to fund our growth and ongoing capital needs. Limitations on access to external financing could adversely affect our operating results.
Assets	Impacted for some suppliers, facilities, or product lines	FMC has a well-diversified portfolio that can help growers adapt to more unpredictable growing conditions and the effect these types of threats to crops. For example, as temperatures increase in the Northern Hemisphere, crops like soybeans and corn could be grown in more northern latitudes, creating an opportunity for FMC to sell its agricultural products to promote plant health and development in new growing regions
Liabilities	Impacted for some suppliers, facilities, or product lines	C continues to follow legislative and regulatory developments regarding climate change because the regulation of greenhouse gases, depending on their nature and scope, could subject FMC manufacturing operations to additional costs or limits on operations. Changes in regulation could subject FMC to environmental liabilities, such liabilities are included in our financial planning process.
Other	Please select	

**C3. Business Strategy**

**C3.1**

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

Yes

**C3.1a**

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

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

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

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

In development, we plan to complete it within the next 2 years

**C3.1c**

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

Risk Management conducts an annual company-wide risk assessment with third-party auditors, and the Sustainability Group conducts an annual materiality assessment with internal and external stakeholders. Both assessments consider risk factors for FMC and its locations, including climate change, GHG emissions, global food supply, resource efficiency, product environmental impacts, health, and safety. Climate change was identified as a material issue. As a result, FMC began collecting information to determine our environmental impacts, such as energy usage, GHG emissions, water usage and waste generation, which are our key sustainability environmental performance indicators. This data was used in developing our 2025 targets to reduce our environmental impacts. Our 2025 targets will help ensure FMC's operations and business strategies are more efficient and resilient so we can address potential market, climate, and regulatory-based changes. An example of how FMC's business strategies have been influenced by climate change is that FMC has identified five major global challenges that we can address through the use of our products and technologies, as well as changes in our business operations. These challenges are climate change, scarce resources, environmental consciousness, land competition and food and health expectations. Climate change has influenced FMC's short-term strategy in that we are making changes in our business operations to become efficient in energy and GHG emissions intensities, conducting life cycle analysis on our products, third-party assurance assessments of our environmental data, and energy assessments to reduce energy intensity at our high-energy use manufacturing sites and updating our Water Risk Assessment for our manufacturing sites.

In 2015, FMC created our 2025 targets to reduce our energy and GHG emission intensities by 15%. FMC is investing in technologies to make our operations more efficient and less impactful on the environment and adapting our product portfolio to provide products that help customers mitigate and adapt to climate change. Our strategic position depends on sustainable investments that ensure our company runs more efficiently and resiliently by 2025. FMC aims to reduce its environmental impact while providing customers with sustainably-advantaged products. In the long-term, our Agricultural Solutions products will be needed by growers in locations that will experience changes in existing physical environments. FMC Agricultural Solutions is developing products that improve agricultural productivity by helping growers increase crop yields to feed a growing global population. Growers must adapt to less available arable land because of climate change impacts, such as temperature and rainfall shifts. Increased urbanization is creating a greater need for food production. FMC Lithium supplies lithium products used in diverse energy-efficient solutions that reduce society's impact on greenhouse gas production.

FMC researchers also developed the Product Stewardship and Sustainability Assessment (PSSA) tool to ensure each new product introduction is more sustainable than current products in use. The PSSA tool includes questions that address FMC's identified five major global challenges. A product must show progress in at least one of the areas without regressing in another before it continues in the development process. R&D scientists and development managers must complete the PSSA at each development stage. More complete answers to the PSSA questions are developed as the product moves forward and more insights are gained into the product's attributes. Every quarter, FMC aggregates across business units to determine our total R&D spend toward developing sustainably advantaged products. In 2017, 82% of FMC's R&D spending was on developing sustainably advantaged products, surpassing our 2020 goal to achieve 80% of R&D investment toward these products. We will continue to introduce these products and track their sales on a quarterly basis. FMC's 2025 targets and the company's official climate change statement are indicative of the fact that FMC realizes its responsibility to limit its contributions to climate change. As FMC measures and manages its progress on the 2020 and 2025 targets it announced in 2015, it will continue to assess how its business strategies and sustainability initiatives can align with the Intended Nationally Determined Contributions (INDCs) of the Paris Agreement. By investing in our product portfolio and sustainably advantaged products, FMC is positioned to impact the aforementioned five major global challenges. FMC Agricultural Solutions is developing narrow spectrum chemistries and biological crop protection products (materials originating from renewable plant or natural microbial sources) that control specific pests and are safer for beneficial organisms. FMC Lithium provides lithium inputs for customers to create batteries for electrically-powered vehicles, more fuel-efficient tires, lighter weight aluminum for aircraft, and other low carbon technologies to allow for greater reductions in greenhouse gas emissions.

## **C3.1g**

---

### **(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?**

On November 1, 2017, FMC divested its Health and Nutrition business and acquired a significant portion of DuPont's Crop Protection business. Due to the planned Initial Public Offering of our Lithium business in late 2018 and business changes related to the acquisition, FMC has not undertaken climate-related scenario analysis to inform its business strategy at this time.

## **C4. Targets and performance**

---

### **C4.1**

---

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

Intensity target

### **C4.1b**

---

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

**Target reference number**

Int 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

100

**% reduction from baseline year**

15

**Metric**

Metric tons CO2e per metric ton of product

**Base year**

2013

**Start year**

2015

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

414261

**Target year**

2025

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

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

**% achieved (emissions)**

100

**Target status**

Underway

**Please explain**

FMC's emissions intensity decreased in 2017 to 0.73 from our 2013 energy intensity of 0.90. We set our 2025 target to reduce our greenhouse gas intensity by 15 percent based on our 2013 emissions baseline year. In 2015, FMC established a 2025 emissions reduction goal for our operations, which is to decrease our greenhouse gas (GHG) intensity by 15 percent. The amount of absolute emissions is highly dependent upon FMC's product production level, which could change the level of our absolute emissions.

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

-15

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

0

---

**C4.2**

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

**Target**

Waste

**KPI – Metric numerator**

metric tons of waste

**KPI – Metric denominator (intensity targets only)**

per metric ton of product

**Base year**

2013

**Start year**

2015

**Target year**

2025

**KPI in baseline year**

118.8

**KPI in target year**

99.7

**% achieved in reporting year**

100

**Target Status**

Underway

**Please explain**

FMC's waste disposed intensity decreased by 16 percent from our 2013 energy intensity, surpassing our 2025 target to reduce our waste disposed intensity by 15 percent based on our 2013 emissions baseline year. We have prioritized waste reduction over several years due to the volume generated at FMC's Agricultural Solutions sites. Since 2013, we have reduced absolute waste-to-landfill by 25 percent and reduced waste intensity by 20 percent. This achievement is a result of improving operational

efficiencies and repurposing waste streams into value-added materials for other industries. FMC Lithium continues to focus on minimizing waste streams and finding opportunities to repurpose materials into usable by-products.

**Part of emissions target**

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

---

**Target**

Energy usage

**KPI – Metric numerator**

Gigajoules

**KPI – Metric denominator (intensity targets only)**

per metric ton of product

**Base year**

2013

**Start year**

2015

**Target year**

2025

**KPI in baseline year**

14

**KPI in target year**

12.1

**% achieved in reporting year**

93

**Target Status**

Underway

**Please explain**

FMC's energy intensity decreased in 2017 by 14 percent from our 2013 energy intensity. We set our 2025 target to reduce our greenhouse gas intensity by 15 percent based on our 2013 emissions baseline year. The amount of absolute energy usage is highly dependent upon FMC's product production level, which could change the level of our absolute energy. As growers' needs change and pest pressures increase, we adjust our active ingredient (AI) product mix to address these challenges for our customers. In some cases, this adjustment results in producing AIs that are more resource intensive. We are committed to minimizing our impacts and; at our manufacturing sites we have invested in energy efficiency equipment improvements to reduce our energy usage.

**Part of emissions target**

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

---

**Target**

R&D investments

**KPI – Metric numerator**

USD(\$) of R&D spend toward developing sustainably advantaged products

**KPI – Metric denominator (intensity targets only)**

Per USD(\$) total R&D spend

**Base year**

2013

**Start year**

2015

**Target year**

2020

**KPI in baseline year**

74

**KPI in target year**

82

**% achieved in reporting year**

100

**Target Status**

Underway

**Please explain**

In 2015, FMC set a goal to dedicate 80 percent of R&D investment toward sustainably advantaged products by 2020. FMC development managers review the sustainability data on projects in development on a quarterly basis. The results are aggregated across the Agricultural Solutions and Lithium businesses to determine total R&D spend. In 2017, we achieved 82 percent of total R&D spend on sustainably advantaged products, surpassing our 2020 goal. This was realized through the dedication of our global R&D teams. With the acquisition of a significant portion of DuPont's Crop Protection business, we expanded FMC's Agricultural Solutions R&D sites from five to 20, safeguarding competitiveness and continued access for growers to new innovative chemistries that protect crops and improve yields.

**Part of emissions target**

**Is this target part of an overarching initiative?**



No, it's not part of an overarching initiative

---

### C4.3

---

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

Yes

### C4.3a

---

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

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	
To be implemented*	3	3749
Implementation commenced*	8	1125
Implemented*	5	6625
Not to be implemented		

### C4.3b

---

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

**Activity type**

Low-carbon energy installation

**Description of activity**

Natural Gas

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

900

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

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

**Payback period**

Please select

**Estimated lifetime of the initiative**

Ongoing

**Comment**

With the completion of a natural gas pipeline to supply the Minera del Altiplano, Argentina, FMC Lithium replaced highly GHG-intensive fuel oil with natural gas.

---

**Activity type**

Energy efficiency: Processes

**Description of activity**

Machine replacement

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

3000

**Scope**

Scope 1

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

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

**Payback period**

Please select

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Through a strong focus on improving energy efficiency FMC Lithium manufacturing sites increased production while reducing absolute GHG emissions through multiple projects. For example, the manufacturing site in Bessemer City implemented a boiled economizer and Minera del Altiplano, Argentina site replaced the burners of the steam tubular boiler.

**Activity type**

Other, please specify (Green packaging)

**Description of activity**

<Not Applicable>

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

2725

**Scope**

Scope 3

**Voluntary/Mandatory**

Voluntary

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

0

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

0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Since 2012, FMC Agricultural Solutions in Brazil has continuously sought more sustainable packaging options. Since 2012, we have sourced "Green Bottle" packaging, which is composed of at least 51 percent sugarcane-based polyethylene. From 2012 to 2017, purchasing Green Bottles allowed FMC to avoid 13,628 tons of CO2 that would have been associated with 100 percent petroleum-based packaging. In addition to the Green Bottles, we use recycled bottles that are composed of at least 85 percent recycled polyethylene. We have also used 100 percent recycled polypropylene bottle caps since 2015. By 2018, we plan to shift to using 100 percent of packaging in the region to these more sustainable options including 85 percent Green Bottles and 15 percent recycled bottles. With the success of this packaging project in Brazil, FMC is investigating how best to extend this project to EMEA and other regions in which FMC operates.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	We are conscious of compliance with regulatory requirements and standards. The global regulatory environment is becoming increasingly complex and requires more resources to effectively manage. FMC is currently expanding our government affairs team in our Asia Pacific, EMEA and Latin America regions to better engage and advise on changing regulatory requirements.
Internal incentives/recognition programs	On an annual basis, FMC recognizes its employees' contributions to EHS and sustainability. They are eligible to be nominated for two awards for their achievements in these areas. FMC's President's Award recognizes the exceptional performance and/or improvement of a plant location, laboratory, and business unit or staff functional department within a Group/Business in the areas of EHS and sustainability. FMC's Chairman's Award recognizes employees or small groups within the company for outstanding achievements and leadership in the areas of EHS and Sustainability.
Other	FMC has a dedicated budget for process improvements at its established Technical Centers, which conduct research in energy efficiency and emissions reductions activities. The Technical Centers perform energy audits and process improvement at FMC facilities and findings from these audits are implemented at other FMC locations as needed.
Dedicated budget for low-carbon product R&D	In 2012, FMC established its first set of long-term sustainability targets in safety, R&D, and community engagement. We have achieved significant progress while planning how FMC can contribute to a more sustainable future. One of these goals was to increase the percentage of our R&D spend on new solutions that positively impact FMC's five identified major global challenges climate change, scarce resources, land competition, environmental consciousness and food and health expectations that we can address with our products and technologies. Success in this area indicates that FMC is developing products that ensure more sustainable options for our customers. As of 2017, 82 percent of FMC's R&D spend was on sustainably advantaged products, which are products that address at least one of FMC's five identified major global challenges. We have exceeded our goal of 80% three years ahead of the deadline. To build on our success in this area, we will be resetting this target in 2018. This focus will ensure a pipeline of improved products far into the future.

C4.5

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

Yes

C4.5a

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

**Level of aggregation**

Group of products

**Description of product/Group of products**

FMC has started to build a strong biological product and technology portfolio through its BioSolutions business. This portfolio is one component of FMC's comprehensive Plant Health platform, which is dedicated to advancing plant yields using biological active ingredients and microbes, which protect and stimulate crops using products derived from natural bacteria found in plants and soil, seed treatments that use bacteria to protect the seed and nurture an emerging plant once in the ground, and plant nutrition, which adds basic nutrients to the soil to ensure optimal conditions for healthy crop growth. FMC's biologicals include Fracture (a fungicide derived from sweet lupine plants), VGR Soil Amendment (a strain of the beneficial bacterium Bacillus licheniformis that creates an improved living seedbed to help increase root system size), and Ethos XB (an insecticide/fungicide that protects corn from a broad spectrum of seedling diseases). This group of products and technologies allows for several environmental advantages for growers, including water savings up to 17%, increased average product yield by 9.5 corn bushels per acre, and decreased applications and passes over crop fields that allow for less energy consumption and avoided emissions.

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

Avoided emissions

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

Addressing the Avoided Emissions Challenge- Chemicals sector

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

16

**Comment**

16% percent of FMC's Agricultural Solutions' revenue is made up of the sustainably advantaged group of products. In 2012, FMC established its first set of long-term sustainability targets in safety, R&D and community engagement. We have achieved significant progress while planning how FMC can contribute to a more sustainable future. One of these goals was to increase the percentage of our R&D spend on new solutions that positively impact FMC's five identified major global challenges climate change, scarce resources, land competition, environmental consciousness and food and health expectations that we can address with our products and technologies. Success in this area indicates that FMC is developing products that ensure more sustainable options for our customers. As of 2017, 82% of FMC's R&D spend was on sustainably advantaged products, which are products that address one of FMC's five identified major global challenges with our products and technologies. We have achieved our goal three years ahead of the deadline. To build on our success in this area, we will be resetting this target in 2018. This focus will ensure a pipeline of improved products far into the future.

---

**Level of aggregation**

Group of products

**Description of product/Group of products**

FMC Lithium produces a number of products from lithium inputs. Lithium hydroxide is a raw material used to produce the highest energy-density lithium ion batteries for energy storage applications, especially for electric vehicle batteries. FMC Lithium's butyllithium is used to create more fuel-efficient tires that reduce gas consumption and greenhouse gas emissions produced from vehicles that use tires made with butyllithium. We also produce lithium for our customers to produce aluminum alloys for lighter-weight airplanes, which consume less jet fuel and produce fewer greenhouse gas emissions. FMC Lithium products are considered low carbon products according to the Climate Bonds Taxonomy, as they address increasing energy efficiency and energy storage.

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

Avoided emissions

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

Climate Bonds Taxonomy

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

28

**Comment**

28 percent of FMC Lithium revenue is comprised of low carbon products within the 2017 reporting year. FMC is providing new lithium applications in a range of industries. We provide lithium to the aluminum industry for lithium aluminum alloys in lighter weight aircraft and aerospace applications. FMC's battery grade lithium is used in residential energy storage power packs, which can be used to support renewable energy sources. Increasing the use of energy storage for renewable energy will allow for avoided emissions from fossil fuel energy sources. As of 2017, 82% of FMC's total R&D spend was on sustainably advantaged products, which are products that positively impact one of FMC's major global challenges, which are climate change, scarce resources, environmental consciousness, land competition, and food and health expectations. We have achieved our goal three years ahead of the deadline. To build on our success in this area, we will be resetting this target in 2018. This focus will ensure a pipeline of improved products far into the future.

---

**C5. Emissions methodology**

---

**C5.1**

---

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

**Scope 1**

**Base year start**

January 1 2013

**Base year end**

December 31 2013

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

322430

**Comment**

**Scope 2 (location-based)**

**Base year start**

January 1 2013

**Base year end**

December 31 2013

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

92831

**Comment**

**Scope 2 (market-based)**

**Base year start**

**Base year end**

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

**Comment**

**C5.2**

---

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

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

US EPA Mandatory Greenhouse Gas Reporting Rule

Other, please specify (IEA CO2 emissions from fuel combustion)

**C5.2a**

---

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

FMC utilizes the US EPA Mandatory Greenhouse Gas Reporting Rule for manufacturing sites located within the United States. FMC uses the International Energy Agency's CO2 Emissions from Fuel Combustion for manufacturing sites outside of the United States, except China. For China, FMC uses the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition).

**C6. Emissions data**

---

**C6.1**

---

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

**Row 1**

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

236324

**End-year of reporting period**

<Not Applicable>

**Comment**

**C6.2**

---

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

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

**Comment**

FMC will investigate reporting a Scope 2, market-based figure next year

**C6.3**

---

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

**Row 1**

**Scope 2, location-based**

67348

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

<Not Applicable>

**End-year of reporting period**

<Not Applicable>

**Comment**

At this time, FMC has prioritized gathering environmental data, including energy use, greenhouse gas emissions, waste and water, from all owned manufacturing data and reducing associated impacts. FMC will evaluate using market-based Scope 2 emission factors in the next reporting cycle.

**C6.4**

---

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

No

**C6.5**

---

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

**Purchased goods and services**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

229148

**Emissions calculation methodology**

FMC collects this information from its active ingredient contract manufacturers on a quarterly basis. FMC uses suppliers' energy data, emissions factors, and GWP values to calculate this data.

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

100

**Explanation**

The emissions associated with FMC's purchased goods and services are relevant. We see our agricultural active ingredient contract manufacturing as a key portion of our scope 3 emissions. At this time, this is the only purchased goods and services source of emissions that we track. We are evaluating how best to calculate the remainder of this emissions source.

**Capital goods**

**Evaluation status**

Not evaluated

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

FMC has not calculated the emissions associated with our capital goods. We are currently investigating methods for calculating this emissions source.

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

### Evaluation status

Not evaluated

### Metric tonnes CO2e

### Emissions calculation methodology

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

### Explanation

FMC is not aware of any other significant Scope 3 fuel and energy related activities not already included in this list.

## Upstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO2e

### Emissions calculation methodology

FMC estimates that the upstream transportation and distribution are relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions from our upstream transportation and distribution activities.

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

### Explanation

The emissions from the upstream transportation and distribution are relevant to FMC when considering the size of our overall footprint. We are evaluating how to best calculate this Scope 3 emissions source. FMC utilizes multiple transportation modes to move raw materials and products, including road, rail, air and ocean freight. The decisions we make in logistics have a significant environmental impact. In 2016, FMC evaluated our footprint using industry standards for measuring the sustainability of logistics. Logistics vary widely by region, so we began by assessing the greenhouse gas emissions generated from global ocean freight and North American road freight. In 2018, we will participate in a Logistics Emissions Accounting & Reduction Network pilot project with BDP International, Inc. and the Smart Freight Centre. This project will test the use of the Global Logistics Emission Council Framework for measuring and accounting transportation emissions from multiple modes. As part of our commitment to transparency, we joined EPA's SmartWay Partnership and, in 2018, we will begin reporting the greenhouse gas emissions that are generated from North American road freight. An update on our progress will be included in the 2018 Sustainability Report.

## Waste generated in operations

### Evaluation status

Not evaluated

### Metric tonnes CO2e

### Emissions calculation methodology

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

### Explanation

FMC has not calculated the emissions associated with our waste generated in operations. We are currently investigating methods for calculating this emissions source.

## Business travel

### Evaluation status

Not relevant, calculated

### Metric tonnes CO2e

3571

### Emissions calculation methodology

FMC has begun collaborating with its business travel vendors to calculate its emissions from business travel. Through this collaboration, we estimate that 3571 metric tons CO2e were generated from a portion of FMC's domestic airline and rail travel in 2017. This estimate is generated using kilometers traveled, type of travel (i.e., domestic air or rail) and converting this to CO2e kg using an emission factor provided by the business travel vendor.

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

100

### Explanation

FMC has begun collaborating with its business travel vendors to calculate its emissions from business travel. Through this collaboration, we estimate that 3571 metric tons CO2e were generated from a portion of FMC's domestic airline and rail travel in 2017. We plan to continue working with our vendors to have global business travel emissions data in 2018.

## Employee commuting

### Evaluation status

Not evaluated

### Metric tonnes CO2e

### Emissions calculation methodology

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

### Explanation

FMC has not calculated the emissions associated with employee commuting. We estimate that it is not relevant when compared to our overall footprint.

#### Upstream leased assets

##### Evaluation status

Not relevant, explanation provided

##### Metric tonnes CO2e

##### Emissions calculation methodology

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

##### Explanation

FMC has upstream leased assets that have a small footprint compared to our overall footprint.

#### Downstream transportation and distribution

##### Evaluation status

Relevant, not yet calculated

##### Metric tonnes CO2e

##### Emissions calculation methodology

FMC estimates that the downstream transportation and distribution are relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions from our downstream transportation and distribution activities.

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

##### Explanation

The emissions from the upstream transportation and distribution are relevant to FMC when considering the size of our overall footprint. We are evaluating how to best calculate this Scope 3 emissions source. FMC utilizes multiple transportation modes to move raw materials and products, including road, rail, air and ocean freight. The decisions we make in logistics have a significant environmental impact. In 2016, FMC evaluated our footprint using industry standards for measuring the sustainability of logistics. Logistics vary widely by region, so we began by assessing the greenhouse gas emissions generated from global ocean freight and North American road freight. In 2018, we will participate in a Logistics Emissions Accounting & Reduction Network pilot project with BDP International, Inc. and the Smart Freight Centre. This project will test the use of the Global Logistics Emission Council Framework for measuring and accounting transportation emissions from multiple modes. As part of our commitment to transparency, we joined EPA's SmartWay Partnership and, in 2018, we will begin reporting the greenhouse gas emissions that are generated from North American road freight. An update on our progress will be included in the 2018 Sustainability Report.

#### Processing of sold products

##### Evaluation status

Relevant, not yet calculated

##### Metric tonnes CO2e

##### Emissions calculation methodology

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

##### Explanation

FMC estimates that the processing of sold goods are relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions associated with these activities.

#### Use of sold products

##### Evaluation status

Relevant, not yet calculated

##### Metric tonnes CO2e

##### Emissions calculation methodology

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

##### Explanation

FMC estimates that the use of sold products is relevant to FMC in considering the size of our overall footprint. We are currently investigating methods to measure the emissions from associated with these activities.

#### End of life treatment of sold products

##### Evaluation status

Not relevant, explanation provided

##### Metric tonnes CO2e

##### Emissions calculation methodology

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

##### Explanation

FMC Agricultural Solutions products are used directly in the field, requiring no end-of-life treatment. Packaging materials and waste are recycled when possible. At this time, FMC is investigating methods to measure the emissions associated with these activities.

**Downstream leased assets**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

FMC has downstream leased assets that have a small footprint compared to our overall footprint.

**Franchises**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

FMC does not have franchises.

**Investments**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

FMC does not have emissions from investments that are not captured elsewhere in this response.

**Other (upstream)**

**Evaluation status**

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

**Other (downstream)**

**Evaluation status**

**Metric tonnes CO2e**

**Emissions calculation methodology**

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

**Explanation**

**C6.7**

---

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

No

**C6.10**

---



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

**Intensity figure**

0.088

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

303672

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

3440900

**Scope 2 figure used**

Location-based

**% change from previous year**

13

**Direction of change**

Decreased

**Reason for change**

Unit total revenue is in thousands USD. In 2017, FMC achieved significant reductions in gross global combined Scope 1 and 2 emissions in metric tons CO2e. This achievement is due to efficiency improvements and changes to cleaner burning fuels. Unit revenue includes full year revenue for FMC's Agricultural Solutions and Lithium businesses, however due to the divestiture of Health and Nutrition in the latter part of 2017 revenue from this business is included through October 31, 2017.

**Intensity figure**

0.726

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

303672

**Metric denominator**

metric ton of product

**Metric denominator: Unit total**

418007

**Scope 2 figure used**

Location-based

**% change from previous year**

20

**Direction of change**

Decreased

**Reason for change**

This achievement is due to efficiency improvements and changes to cleaner burning fuels.

**C7. Emissions breakdowns**

**C7.1**

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

Yes

**C7.1a**

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	236084	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	125	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	115	IPCC Fifth Assessment Report (AR5 – 100 year)

**C7.2**

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	69450
Other, please specify (Rest of world)	166874

**C7.3**

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

By business division

**C7.3a**

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

Business division	Scope 1 emissions (metric ton CO2e)
Agricultural Solutions	71017
Lithium	115673
Health and Nutrition	49634

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	236324	<Not Applicable>	
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

**C7.5**

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	33107		79239	
Other, please specify (Rest of world)	34241		274815	

**C7.6**

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

By business division

**C7.6a**

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Agricultural Solutions	28962	
Lithium	25095	
Health and Nutrition	13291	

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	67348		
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

**C-CH7.8**

**(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.**

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology
Specialty chemicals	100	Value of metric tons CO2e is provided by suppliers.

**C-CH7.8a**

**(C-CH7.8a) Disclose sales of products that are greenhouse gases.**

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	
Methane (CH4)	0	
Nitrous oxide (N2O)	0	
Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF6)	0	
Nitrogen trifluoride (NF3)	0	

**C7.9**

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

Decreased

**C7.9a**

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable >		
Other emissions reduction activities	3900	Decreased	1	In 2017, 3900 tCO2e were reduced through change in low-carbon energy (natural gas) and emissions reduction activities, and our total Scope 1 and Scope 2 emissions in the previous year was 345763 tCO2e, therefore we arrived at 1% through $(3900/345763)*100= 1\%$ .
Divestment	38000	Decreased	11	On November 1, 2017 FMC divested its Health and Nutrition business. The Health and Nutrition business significantly contributed to FMC's overall environmental impact for the majority of 2017. Therefore, its manufacturing intensity data through the third quarter has been included in this disclosure, but will not be included in future reports. FMC Agricultural Solutions and Lithium both decreased emissions on an absolute basis, the decrease was relatively small compared to the decrease due to partial year reporting by the Health and Nutrition business. FMC's total Scope 1 and Scope 2 emissions in the previous year was 345763 tCO2e, therefore we arrived at 11% through $(38000/345763)*100=11\%$ .
Acquisitions		<Not Applicable >		
Mergers		<Not Applicable >		
Change in output		<Not Applicable >		
Change in methodology		<Not Applicable >		
Change in boundary		<Not Applicable >		
Change in physical operating conditions		<Not Applicable >		
Unidentified		<Not Applicable >		
Other		<Not Applicable >		

## C7.9b

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

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**  
More than 0% but less than or equal to 5%

### C8.2

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

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

## C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	37721	983156	1020877
Consumption of purchased or acquired electricity	<Not Applicable>		354054	354054
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>		30100	30100
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>		<Not Applicable>	
Total energy consumption	<Not Applicable>	37721	1367309	1405030

## C-CH8.2a

### (C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	1020877
Consumption of purchased or acquired electricity	<Not Applicable>	354054
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	30100
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	
Total energy consumption	<Not Applicable>	1405030

## C8.2b

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

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

## C8.2c

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

#### Fuels (excluding feedstocks)

Biomass Municipal Waste

#### Heating value

HHV (higher heating value)

#### Total fuel MWh consumed by the organization

33765

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

<Not Applicable>

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

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

33765

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

<Not Applicable>

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

#### Fuels (excluding feedstocks)

Diesel

#### Heating value

HHV (higher heating value)

#### Total fuel MWh consumed by the organization

15182

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

<Not Applicable>

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

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

15182

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

<Not Applicable>

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

---

**Fuels (excluding feedstocks)**

Jet Kerosene

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

2058

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

<Not Applicable>

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

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

2058

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

<Not Applicable>

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

---

**Fuels (excluding feedstocks)**

Fuel Oil Number 2

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

67747

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

<Not Applicable>

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

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

67747

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

<Not Applicable>

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

---

**Fuels (excluding feedstocks)**

Residual Fuel Oil

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

17994

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

<Not Applicable>

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

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

17994

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

<Not Applicable>

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

---

**Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

1114

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

<Not Applicable>

---

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

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

1114

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

<Not Applicable>

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

---

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

883017

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

<Not Applicable>

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

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

723429

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

<Not Applicable>

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

159588

---

C8.2d

---

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

**Biomass Municipal Waste**

**Emission factor**

1660.2

**Unit**

metric tons CO2e per metric ton

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Diesel**

**Emission factor**

2.7058

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Fuel Oil Number 2**

**Emission factor**

2.7058

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Jet Kerosene**

**Emission factor**

2.5843

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Liquefied Petroleum Gas (LPG)**

**Emission factor**

1.5068

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Natural Gas**

**Emission factor**

1.9245

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**

**Residual Fuel Oil**

**Emission factor**

2.9868

**Unit**

metric tons CO2e per m3

**Emission factor source**

US EPA Direct Emissions from Stationary Combustion Source

**Comment**



C8.2e

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity				
Heat				
Steam	1050976	1050976	37721	37721
Cooling				

C-CH8.2e

(C-CH8.2e) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

	Total gross generation (MWh) inside chemicals sector boundary	Generation that is consumed (MWh) inside chemicals sector boundary
Electricity		
Heat		
Steam	1050976	1050976
Cooling		

C8.2f

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

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

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

**Low-carbon technology type**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Comment**

C-CH8.3

(C-CH8.3) Disclose details on your organization's consumption of feedstocks for chemical production activities.

C-CH8.3a

(C-CH8.3a) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

	Percentage of total chemical feedstock (%)
Oil	
Natural Gas	
Coal	
Biomass	
Waste	
Fossil fuel (where coal, gas, oil cannot be distinguished)	
Unknown source or unable to disaggregate	100

C9. Additional metrics

C9.1

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

**Description**

Waste

**Metric value**

99.7

**Metric numerator**

kilograms

**Metric denominator (intensity metric only)**

per metric ton of product

**% change from previous year**

54

**Direction of change**

Increased

**Please explain**

FMC's waste disposed decreased in 2017 by 16 percent from our 2013 energy intensity, surpassing our 2025 target to reduce our waste disposed intensity by 15 percent based on our 2013 emissions baseline year. We have prioritized waste reduction over several years due to the volume generated at FMC's Agricultural Solutions sites. Since 2013, we have reduced absolute waste-to-landfill by 25 percent and reduced waste intensity by 20 percent. This achievement is a result of improving operational efficiencies and repurposing waste streams into value-added materials for other industries. FMC Lithium continues to focus on minimizing waste streams and finding opportunities to repurpose materials into usable by-products. Despite significant progress toward achieving our waste reduction targets over the baseline, we experience increases in absolute waste disposed and waste disposed intensities in Agricultural Solutions and Lithium in 2017.

---

**Description**

Energy use

**Metric value**

12.1

**Metric numerator**

Gigajoules

**Metric denominator (intensity metric only)**

per metric ton of product

**% change from previous year**

20

**Direction of change**

Decreased

**Please explain**

FMC's energy usage decreased in 2017 by 14 percent from our 2013 energy intensity. We set our 2025 target to reduce our greenhouse gas intensity by 15 percent based on our 2013 emissions baseline year. The amount of absolute energy usage is highly dependent upon FMC's product production level, which could change the level of our absolute energy. As growers' needs change and pest pressures increase, we adjust our active ingredient (AI) product mix to address these challenges for our customers. In some cases, this adjustment results in producing AIs that are more resource intensive. We are committed to minimizing our impacts, at our manufacturing sites we have invested in energy efficiency equipment improvements to reduce our energy usage.

---

**C-CH9.3a**

**(C-CH9.3a) Provide details on your organization's chemical products.**

**Output product**

Specialty chemicals

**Production (metric tons)**

418007

**Capacity (metric tons)**

**Direct emissions intensity (metric tons CO2e per metric ton of product)**

0.73

**Electricity intensity (MWh per metric ton of product)**

3.36

**Steam intensity (MWh per metric ton of product)**

**Steam/ heat recovered (MWh per metric ton of product)**

**Comment**

---

---

**C-CH9.6**

**(C-CH9.6) Disclose your organization's low-carbon investments for chemical production activities.**

## C10. Verification

---

### C10.1

---

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

### C10.1a

---

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

**Scope**

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

ERM CVS 2017 CDP Assurance Statement FMC\_13Jun2018\_FINAL.pdf

**Page/ section reference**

The assurance statement attached is also available in FMC's 2017 Sustainability Report on page 30.

**Relevant standard**

ISAE3000

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

100

---

**Scope**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

ERM CVS 2017 CDP Assurance Statement FMC\_13Jun2018\_FINAL.pdf

**Page/ section reference**

The assurance statement attached is also available in FMC's 2017 Sustainability Report on page 30.

**Relevant standard**

ISAE3000

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

100

### C10.2

---

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

Yes

### C10.2a

---

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Other, please specify (Energy and waste totals and intensities)	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity, total energy use, waste intensity, total waste generated and total waste disposed per disposal type verified.
C8. Energy	Other, please specify (Energy use total and intensity )	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity and total energy use verified.
C9. Additional metrics	Other, please specify (Energy and waste totals and intensities)	ISAE3000	FMC, in addition to GHG emissions third-party verified, has energy intensity, total energy use, waste intensity, total waste generated and total waste disposed per disposal type verified.

**C11. Carbon pricing**

**C11.1**

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

Yes

**C11.1a**

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

EU ETS

**C11.1b**

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

**EU ETS**

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

15

**Period start date**

January 1 2017

**Period end date**

December 31 2017

**Allowances allocated**

51563

**Allowances purchased**

0

**Verified emissions in metric tons CO2e**

34764

**Details of ownership**

Facilities we own and operate

**Comment**

**C11.1d**

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

In 2015, FMC acquired Cheminova, a chemical company based in Denmark. One of Cheminova's facilities in Ronland, Denmark, participates in the European Union (EU) Emissions Trading Scheme (ETS) and falls below the current emissions cap. In 2021, the next phase of the EU ETS will come into effect, and depending on what the emissions cap is, this facility could be above the cap. FMC will continue to invest and make improvements in its energy use and greenhouse gas emission levels prior to 2021 to prepare for the potential of a lower emissions cap.

**C11.2**

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

No

### C11.3

---

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

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

## C12. Engagement

---

### C12.1

---

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

Yes, our suppliers

Yes, other partners in the value chain

### C12.1a

---

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

**Type of engagement**

Compliance & onboarding

**Details of engagement**

Climate change is integrated into supplier evaluation processes

**% of suppliers by number**

46

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

50

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

**Rationale for the coverage of your engagement**

Collaboration and strong partnerships with suppliers and customers are very important to FMC to ensure we meet our sustainability commitments, from sourcing, to manufacturing, to transportation and product stewardship. FMC chooses to work only with suppliers and vendors who share our commitment to ethical and sustainable business practices. FMC has an established Supplier Code of Conduct that requests information on human rights, labor, environmental, health and safety requirements from its suppliers. We prioritize our engagements by evaluating risk and opportunities in the supply chain and have tools and processes to support us (e.g. spend analytics, supplier assessments, long-term contracts, etc.). For all new raw material suppliers, FMC's Procurement Group employs an internal supplier prequalification process. This process assesses a supplier's sustainability efforts, safety record, environmental and quality management systems and responsible sourcing, and ensures that the raw material supply is ethical, reliable and safe. In addition to the prequalification screening, FMC partners with an external screening and risk management provider to qualify contractors who may be exposed to the hazards of the manufacturing site or may expose personnel, community members or the environment to additional hazards in the course of their work. The third-party process carefully assesses these contractors, including evaluation of safety, environment and sustainability criteria, to best protect people and the environment. In 2017, 100 percent of our high-risk contractors in the US were screened and will be re-screened annually. In 2016, we initiated a partnership with the Supplier Ethical Data Exchange (Sedex) to thoroughly evaluate supplier social responsibility. Through Sedex, suppliers answer a series of questions regarding their responsible and ethical business practices, including human rights, labor standards, health and safety, and business ethics. FMC has initiated relationships with suppliers that are current members of Sedex and has successfully engaged with 67 percent of those current members. Sedex regularly updates FMC on changes to supplier profiles. In phase two of this partnership, we will identify our strategic suppliers that are not current Sedex members and work with them to join the program.

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

The number of suppliers (340) and approximate percentage of total spend (50%) provided refers to FMC's direct material suppliers (approximately 743).

**Comment**

---

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Other, please specify (Green packaging)

**% of suppliers by number**

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

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

**Rationale for the coverage of your engagement**

Throughout FMC's sustainability journey, employees responsible for product packaging have worked closely with suppliers to find sustainable packaging options while ensuring the highest standards of safety and quality for our customers. In 2012, FMC Agricultural Solutions in Brazil initiated a project to replace the existing 100 percent fossil packages, Virgin Polyethylene HDPE, with more sustainable materials. This effort resulted in FMC developing two types of packages. "Family Green" packages made of at least 51 percent Polyethylene Green, produced from sugarcane. In 2017, Family Green packages represented 53 percent of the packages used in Brazil and by 2018, it is expected to reach 82 percent. The other type of packaging represents 18 percent of our volume. It is produced with at least 85 percent of recycled polyethylene and 15 percent of virgin fossil material. In this way, nearly 100 percent of the hard packages used by Agricultural Solutions in Brazil will be either Family Green or included recycled material.

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

It is expected by 2018 that the Family Green packaging program will have contributed to the reduction of 13,628 metric tons of CO2 in the atmosphere.

**Comment**

---

**C12.1c**

---

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

FMC sources active ingredients (AIs) for FMC-owned formulation sites globally through contract manufacturers. The synthesis of these complex chemicals has a material environmental footprint compared to FMC-owned formulation and packaging operations, so we work with our contract manufacturers to monitor and reduce these impacts.

**C12.3**

---

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

Direct engagement with policy makers

Trade associations

Funding research organizations

Other

## C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Energy Storage)	Support	FMC engages policy makers in the U.S. on issues related to energy storage. Specifically, supports federal funding for the advancement, manufacturing, and adoption of lithium-based energy storage.	FMC has identified five major global challenges that we can address through the use of our products, technologies and changes in our business operations. These challenges are climate change, scarce resources, environmental consciousness, land competition, and food and health expectations. We see energy storage as a means to reduce climate change and support the passage of federal funding that helps to advance lithium-based energy storage and its wide scale adoption in the energy sector. Our lithium products are used by customers to create batteries for electrically-powered vehicles, more efficient tires, lighter-weight aluminum for aircraft and other low carbon technologies.

## C12.3b

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

Yes

## C12.3c

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

#### Trade association

American Chemistry Council (ACC)

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

Consistent

#### Please explain the trade association's position

The American Chemistry Council (ACC) and its members believe that chemistry plays an integral role in solving our world's sustainability challenges. The ACC is committed to advancing safe, innovative, effective, and economically viable chemical products and technologies that are key to unlocking sustainability solutions. The ACC's sustainability principles call on its members to address the environmental impacts from operations by achieving measurable reductions in greenhouse gas emissions and distribution of products, conserving materials and resources, reducing waste through re-use and recycling, and collaborating to reduce marine debris and its impacts. The ACC has supported a number of proposals designed to reduce greenhouse gases, and improve energy generation and efficiency. The ACC has not endorsed a specific climate change policy proposal.

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

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC supports the ACC in its mission to deliver business value through advocacy, political engagement, communications and scientific research. The members of ACC are a diverse group of companies with differing positions on issues that impact the chemical industry. Overall, FMC supports the ACC's sustainability principles that call on ACC members to address their environmental impacts.

#### Trade association

CropLife America (CLA)

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

Mixed

#### Please explain the trade association's position

CropLife America (CLA) supports a number of proposals designed to impact greenhouse gas generation, energy generation and energy efficiency.

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

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC's Vice President, Chief Marketing Officer, serves on CLA's Board of Directors and was elected the 46th Chair of the board in 2015 to serve a 2-year term. She was the first woman to hold this position. FMC supports CLA in its efforts to engage with policy makers at the federal, state and local levels to develop policies and regulations. CLA is comprised of a diverse group of members that could potentially differ on certain issues that impact its members. In situations of conflict, all members have the right to advocate for an alternative position.

#### Trade association

CropLife International (CLI) (Farming First)

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

Mixed

#### Please explain the trade association's position

CropLife International (CLI) supports and is a member of Farming First, a coalition of multi-stakeholder organizations that articulates, endorses and promotes practical, actionable programs and activities to further sustainable agricultural development worldwide. Farming First has a set of recommendations on climate change to all governments: 1) Support the unique role of agriculture in the global climate change response, 2) Encourage the use of all available and applicable climate change solutions, 3) Promote funding mechanisms which support the needs of all levels and forms of farming, 4) Reward resource-based productivity improvements as the direct contributor to climate-change effectiveness, and 5) Invest in capability sharing to encourage all farmers to play a role in climate change while safeguarding local and global security.

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

FMC is a member of numerous trade and business associations that relate to the chemical, manufacturing, agricultural and consumer industries and their associated priority issues. FMC's President and Chief Operating Officer, is a member of CLI's Strategy committee. FMC supports CLI in its efforts to engage with policy makers to develop policies and regulations. CLI is comprised of a diverse group of members that could potentially differ on certain issues that impact its members. In situations of conflict, all members have the right to advocate for an alternative position.

## C12.3d

---

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

No

## C12.3e

---

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

The communities in which FMC operates are vital to the company's success. To understand how FMC can positively influence those communities, each FMC-owned manufacturing site reports quarterly on community activities, which are organized into four categories: safety, operational transparency, community partnership and community leadership. If a site completes an activity in each of the four categories, thus providing diverse and valuable interactions with the community they earn a 100 on the Community Engagement Index. The 2017 combined Agricultural Solutions and Lithium result of 97 on the Index shows that we are making meaningful progress towards the 2020 goal of 100. In addition to the four categories, promoting food security and improved nutrition across our locations is an important part of FMC's community engagement strategy. Two long-term partnerships include a nutrition development program – providing nutritionally balanced lunches at three schools in the Antofagasta de la Sierra village and proper nutrition training to pregnant women - in Minera de Altiplano, Argentina and Philabundance – an impactful and collaborative organization distributing more than 24 million pounds of food each year to those in need – in Philadelphia, Pennsylvania, United States.

## C12.3f

---

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

FMC has an established set of strategic and governance processes that ensure the collaboration of FMC's Governmental Affairs team with FMC's executive leadership team, business leaders, and sustainability group on many issues, including sustainability and climate change-related issues. For example, members of FMC's Governmental Affairs Group participate on FMC's Sustainability Steering Team alongside leaders of FMC's executive leadership, leaders of FMC's Agricultural Solutions and Lithium businesses as well as group leaders from Manufacturing, EHS, R&D, Finance, Communications, Procurement, Human Resources, and Legal. In addition, members of FMC's Corporate Government Affairs have regular interactions with FMC's leaders from each function and geography in which FMC operates to define and ensure the priorities of the company are advocated for in our interactions with policy makers, trade associations, and research organizations. Through these interactions and meetings, FMC is able to discuss and ensure the company's common approach to climate change is consistent.

## C12.4

---

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

#### Publication

In mainstream reports

#### Status

Complete

#### Attach the document

2017 FMC Annual Report and 10k.pdf

#### Content elements

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

---

#### Publication

In voluntary sustainability report

#### Status

Complete

#### Attach the document

#### Content elements

Governance  
Strategy  
Emissions figures  
Emission targets  
Other metrics

---

## C14. Signoff



---

C-FI

---

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

C14.1

---

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

	Job title	Corresponding job category
Row 1	Chief Executive Officer and Chairman of the Board, FMC Corporation	Chief Executive Officer (CEO)

Submit your response

---

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors Customers

**Please confirm below**

I have read and accept the applicable Terms