

Dover Corporation - Climate Change 2019

C0. Introduction

C0.1

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

Dover is a diversified global manufacturer with annual revenue of approximately \$7 billion. We deliver innovative equipment and components, specialty systems, consumable supplies, software and digital solutions, and support services through three operating segments: Engineered Systems, Fluids, and Refrigeration & Food Equipment. Dover combines global scale with operational agility to lead the markets we serve. Recognized for our entrepreneurial approach for over 60 years, our team of 24,000 employees takes an ownership mindset, collaborating with customers to redefine what's possible.

Dover's three operating segments are structured around our key end markets and are designed to support focused growth strategies. Our segment structure also allows us to leverage Dover's scale and channel presence while capitalizing on productivity initiatives.

Dover's three operating segments are as follows:

- Our Engineered Systems segment is comprised of two platforms, Printing & Identification and Industrials, and is focused on the design, manufacture and service of critical equipment, consumables and components serving the fast-moving consumer goods, digital textile printing, vehicle service, environmental solutions and industrial end markets.
- Our Fluids segment, serving the Fueling and Transport, Pumps and Process Solutions end markets, is focused on the safe handling of critical fluids across the retail fueling, chemical, hygienic, oil and gas and industrial end markets.
- Our Refrigeration & Food Equipment segment is a provider of innovative and energy efficient equipment and systems serving the commercial refrigeration and food equipment end markets.

C0.2

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

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

C0.3

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

Argentina
Australia
Belgium
Brazil
Canada
China
Czechia
Denmark
Dominican Republic
France
Germany
India
Italy
Malaysia
Mexico
Netherlands
Poland
Singapore
Slovakia
Sweden
Switzerland
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.

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	As part of its oversight of risk management, the full Board of Directors (the Board) reviews Dover's material risks, including those related to environmental and social issues. Dover's CEO, who is a member of the Board, has management responsibility for sustainability and climate-related issues. In addition, Dover's senior management is fully involved and responsible for managing climate change risk, with the Director, Global Sourcing – Center of Excellence taking the lead on coordinating Dover's day-to-day performance on climate-related issues.

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	Reviewing and guiding strategy Reviewing and guiding risk management policies	As part of its oversight of risk management, the Board reviews Dover's material risks, including those related to environmental and social issues. The Board is focused on our long-term business strategy, including fostering sustainability-driven innovations, and incorporates our sustainability risks and opportunities into its overall strategic decision-making. The Board receives periodic updates on company-wide energy and carbon performance against targets and is regularly briefed on each segment's safety and productivity. Dover's CEO, who is a member of the Board, has management responsibility for sustainability and climate-related issues. In addition, Dover's senior management is fully involved and responsible for managing climate change risk, with the Director, Global Sourcing – Center of Excellence taking the lead on coordinating Dover's day-to-day performance on climate-related issues. As part of this mandate, the Director, Global Sourcing – Center of Excellence oversees the Sustainability Working Committee ("Working Committee"), which is comprised of all segment supply chain directors and representatives from Dover's operating companies. The Working Committee is responsible for driving the implementation of Dover's sustainability initiatives, including those related to energy and climate change. The Working Committee monitors energy performance and provides support, training and tools for all of Dover's operating companies in pursuit of energy efficiency and carbon reduction.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other, please specify (SVP Global Sourcing)	Both assessing and managing climate-related risks and opportunities	Quarterly
Other C-Suite Officer, please specify (Segment CEOs)	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 (do not include the names of individuals).

The Board oversees risk management, and periodically reviews the processes established by management to identify and manage risks, including those related to environmental and social issues. The Board is focused on our long-term business strategy, including fostering sustainability-driven innovations, and incorporates our sustainability risks and opportunities into its overall strategic decision-making. Our Board also receives periodic updates on company-wide energy and carbon performance against targets, and is regularly briefed on each segment's operational performance including productivity and safety performance.

Dover's CEO, who is a member of the Board, has management responsibility for climate-related issues. In addition, the CEOs of Dover's business segments, who are part of Dover's executive management and report directly to the CEO, are fully engaged in assessing and managing climate-related risks and opportunities for their operating companies from an operational efficiency perspective (energy and carbon) as well as in overseeing the development of products that help our customers meet their energy and climate change goals.

Dover's Director, Global Sourcing – Center of Excellence takes the lead on coordinating Dover's day-to-day performance on climate-related issues. As part of this mandate, the Director, Global Sourcing – Center of Excellence oversees the Working Committee, which is comprised of all segment supply chain directors and representatives from Dover's operating companies. The Working Committee is responsible for driving the implementation of Dover's sustainability initiatives, including those related to energy and climate change. The Working Committee monitors energy performance and provides support, training and tools for all of Dover's operating companies in pursuit of energy efficiency and carbon reductions. The Working Committee solicits feedback and drives action from the facility level Energy Efficiency Captains.

Dover is committed to creating economic value for shareholders by developing products designed to help customers meet their sustainability goals in response to evolving regulatory and environmental standards. Dover believes that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. Each of Dover's segments is dedicated to this important initiative. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on the opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. Over the last 7 years, Markem-Imaje, a marking and coding business within Dover's Engineered Systems segment, has reduced its carbon emissions by 40% and produced 18% less waste by implementing an Environmental, Health and Safety program. Lastly, in Dover's Fluids segment, OPW, a leader in fluid handling and car wash equipment, released the 14 Series fueling nozzle family that features patented and patent-pending technology to prevent dripping of excess fuel while motorists refuel their vehicles.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Under Dover's annual cash incentive plan, one of the CEO's objectives is to further develop Dover's strategy, analysis and management of ESG matters, including climate related performance.

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	3	
Medium-term	3	10	
Long-term	10	30	

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Climate related risks are identified at the corporate, operating company and individual asset levels through the annual business planning process. Operating companies' productivity goals and projects related to energy and carbon efficiency across facilities are monitored on a regular basis at the segment and corporate level. Operating company leaders are in constant contact with customers and regularly assess their energy and carbon efficiency needs in order to develop products that can help customers meet their sustainability goals. Operating and customer tracking is used as input to annual budgets for operating companies which are then approved at the segment and corporate level. Similarly, external trends at the domestic and international level are monitored by operating company and segment and corporate management, including the legal department, the global sourcing function, the corporate development function and through management's overall risk assessment exercise.

C2.2b

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

One way that Dover defines a substantive financial or strategic impact on our business is an event or trend that could drive a significant positive or negative change in our sales revenue, pre-tax earnings, market position, competitive landscape or product innovation. Examples include innovative new products that would meet significant customer needs, or a sustained downturn in a key market that would reduce demand for our products and services. The assessment of risk includes consideration of the potential impact of the risk on our overall market position, competitive landscape, product innovation, sales revenue and pre-tax earnings as well as the likelihood and severity of the impact and mitigating controls in place.

We have established a risk assessment team consisting of senior executives, which annually, with the assistance of a consultant, oversees a risk assessment made at the segment and operating company levels and, with that information in mind, performs an assessment of the overall risks our company may face, including with respect to any climate related risks. Each quarter, this team reassesses the risks at the Dover level, the severity of these risks and the status of efforts to mitigate them and reports to the Board on that reassessment. At this time, there have been no material effects upon our earnings and competitive position resulting from our compliance with laws or regulations enacted or adopted relating to climate change. We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations.

As previously stated, we are committed to creating sustainable business practices that protect the environment, and through the development of products that help our customers meet their sustainability goals. We face risk relating to increasing product/service, including with respect to the development of more sustainable products, and price competition by international and domestic competitors, including new entrants, and our inability to introduce new and competitive products could cause our businesses to generate lower revenue, operating profits and cash flows. Our competitive environment is complex because of the wide diversity of the products that our businesses manufacture and the markets they serve. In general, most of our businesses compete with only a few companies, and the key competitive factors are customer service, product quality, price and innovation. Our ability to compete effectively depends on how successfully we anticipate and respond to various competitive factors, including new products, including sustainability products, digital solutions and support services that may be introduced by competitors, changes in customer preferences, new business models and technologies, and pricing pressures. If our businesses are unable to anticipate their competitors’ developments or identify customer needs and preferences on a timely basis, or successfully introduce new products, including sustainable products, digital solutions and support services in response to such competitive factors, they could lose customers to competitors. If our businesses do not compete effectively, we may experience lower revenue, operating profits, and cash flow.

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	Our businesses’ domestic and international sales and operations are subject to risks associated with changes in laws, regulations and policies, including carbon emission regulations and energy efficiency and design regulations. Failure to comply with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties as well as potential damage to our reputation. We cannot provide assurance that our costs of complying with new and evolving regulatory reporting requirements and current or future laws will not exceed our estimates. At this time, there have been no material effects upon our earnings and competitive position resulting from our compliance with laws or regulations enacted or adopted relating to climate change. We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from current regulations will not be significant in the short- to medium-term. We expect the regulatory impacts associated with current and future climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. Currently Dover is not subject to country or regional cap and trade regulations.

	Relevance & inclusion	Please explain
Emerging regulation	Relevant, always included	Our businesses' domestic and international sales and operations are subject to risks associated with changes in laws, regulations and policies, including carbon emission regulations and energy efficiency and design regulations. Failure to comply with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties as well as potential damage to our reputation. We cannot provide assurance that our costs of complying with new and evolving regulatory reporting requirements and current or future laws will not exceed out estimates. We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. As an example of an indirect impact, the EU Emissions Trading System covers large emitters, many of which provide power or raw materials to Dover. As the cost for EU Allowances goes up for these large emitters, the pass through costs for Dover may rise.
Technology	Relevant, always included	We are committed to creating economic value for shareholders by developing products designed to help our customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In addition to product innovation, we are also investing in developing digital technologies. In 2018, we opened our new digital labs center in the greater Boston area. The facility serves as the hub for our digital strategy and platform, and as a research and development center for our Markem-Imaje business unit which is part of our Engineered Systems segment. We believe that the digital labs center will enhance the effectiveness of our products and fuel our commercial growth strategy by helping us make progress on digitization opportunities and by providing machine learning, artificial intelligence, Industrial Internet of Things (IIoT) and digital commerce capabilities. Our businesses pursue digital strategies based on customer needs and will now be able to leverage cross-company capabilities developed at the digital labs center. For example, with the support of the digital labs center, Hydro, which manufactures chemical injecting, proportioning, dispensing and medicating equipment within our Fluids segment, launched Hydro Connect in 2018. Hydro Connect is a cloud-based IIoT platform that gives end users increased visibility into their operations, optimizes production, reduces costs and increases customer satisfaction. Building on this momentum, we launched a digital initiative in 2018 to help our businesses increase sales and further improve customer satisfaction through digital technology. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.
Legal	Relevant, always included	Our businesses' domestic and international sales and operations are subject to risks associated with changes in laws, regulators and policies, including carbon emission regulations and energy efficiency and design regulations. Failure to comply with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties as well as potential damage to our reputation. We cannot provide assurance that our costs of complying with new and evolving regulatory reporting requirements and current or future laws will not exceed out estimates. As described in the regulatory sections above, climate-related compliance risk is included in our risk assessments. Currently Dover is not subject to country or regional cap and trade or other climate-related regulation. Dover was not subject to any climate-related litigation claims in 2018.
Market	Relevant, always included	Dover is constantly assessing shifts in supply and demand for certain commodities, products, and services. We are committed to creating economic value for shareholders by developing products designed to help our customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. Each of Dover's segments is dedicated to this important initiative. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. Over the last 7 years, Markem-Imaje, a marking and coding business within Dover's Engineered Systems segment, has reduced its carbon emissions by 40% and produced 18% less waste by implementing an Environmental, Health and Safety program. Lastly, in Dover's Fluids segment, OPW, a leader in fluid handling and car wash equipment, released the 14 Series fueling nozzle family that features patented and patent-pending technology to prevent dripping of excess fuel while motorists refuel their vehicles. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.
Reputation	Relevant, always included	The Company's entrepreneurial business model encourages, promotes and fosters deep customer engagement and collaboration, which has led to Dover's well-established and valued reputation for providing superior customer service and industry-leading product innovation. The success of new and improved products, digital solutions and support services depends on their initial and continued acceptance by our customers. Certain of our businesses sell in industries that are characterized by rapid technological changes, frequent new product introductions, changing industry standards and corresponding shifts in customer demand, which may result in unpredictable product transitions, shortened life cycles and increased importance of being first to market. Failure to correctly identify and predict customer needs and preferences, to deliver high quality, innovative and competitive products to the market, to adequately protect our intellectual property rights or to acquire rights to third-party technologies and to stimulate customer demand for, and convince customers to adopt, new products, digital solutions and support services could adversely affect our consolidated results of operations, financial condition and cash flows.

	Relevance & inclusion	Please explain
Acute physical	Relevant, always included	While Dover has a global portfolio, approximately 75% of Dover's facilities are located in the US and Europe. Risk analysis indicates potential impacts in low lying areas with specific high risk sites identified. Dover incorporates physical risk analysis into business continuity planning. Dover facilities have business continuity plans to protect people, property, and assets, prepare for any catastrophic events and ensure timely recovery of business operations. Based on Dover's focus sites, key locations where physical impacts are potentially highest include: North America: California, Great Lakes, SE and NE Coastline Asia: SE Asia and East Asia, especially Malaysia and China Europe: Northern Europe, especially the UK sites Based on the current predictions associated with the physical impacts of climate change, the principle risks are flooding from sea-level rise, inundation events at the margin of rivers and estuaries, flash flooding, increased incidence and strength of storms and in some cases, drought and heat waves. However, based on the ability of the developed world to adapt more quickly and extensively to major climate shocks, there will inevitably be a higher risk factor associated with climatic events in developing countries. In this context, the high concentration of Dover's larger and more asset-rich facilities in the US would likely help to reduce possible physical risks associated with climate change going forward.
Chronic physical	Relevant, always included	While Dover has a global portfolio, approximately 75% of Dover's facilities are located in the US and Europe. Risk analysis indicates potential impacts in low lying areas with specific high risk sites identified. Dover incorporates physical risk analysis into business continuity planning. Dover facilities have business continuity plans to protect people, property, and assets, prepare for any catastrophic events, and ensure timely recovery of business operations. Based on Dover's review of physical risk, key locations where physical impacts are potentially highest include: North America: California, Florida, Great Lakes, SE and NE Coastline Asia: SE Asia and East Asia, especially Malaysia and China Europe: Northern Europe, especially the UK sites Based on the current predictions associated with the physical impacts of climate change, the principle risks are flooding from sea-level rise, inundation events at the margin of rivers and estuaries, flash flooding, increased incidence and strength of storms and in some cases, drought and heat waves. However, based on the ability of the developed world to adapt more quickly and extensively to major climate shocks, there will inevitably be a higher risk factor associated with climatic events in developing countries. In this context, the high concentration of Dover's larger and more asset-rich facilities in the US would likely help to reduce possible physical risks associated with climate change going forward.
Upstream	Relevant, always included	We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We expect the indirect regulatory impacts associated with climate change would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. As an example of an indirect impact, the EU Emissions Trading System covers large emitters, many of which provide power or raw materials to Dover. As the cost for EU Allowances goes up for these large emitters, the pass through costs may rise. We use a wide variety of raw materials, primarily metals and semi-processed or finished components, which are generally available from a number of sources. As a result, shortages or the loss of any single supplier have not had, and are not likely to have, a material impact on operating profits. While the required raw materials are generally available, commodity pricing can be volatile, particularly for various grades of steel, copper, and select other commodities. Although cost increases in commodities may be recovered through increased prices to customers, our operating results are exposed to such fluctuations. We attempt to control such costs through fixed-price contracts with suppliers and various other programs, such as our global supply chain activities.
Downstream	Relevant, always included	We are committed to creating economic value for shareholders by developing products designed to help our customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. Each of Dover's segments is dedicated to this important initiative. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. Over the last 7 years, Markem-Imaje, a marking and coding business within Dover's Engineered Systems segment, has reduced its carbon emissions by 40% and produced 18% less waste by implementing an Environmental, Health and Safety program. Lastly, in Dover's Fluids segment, OPW, a leader in fluid handling and car wash equipment, released the 14 Series fueling nozzle family that features patented and patent-pending technology to prevent dripping of excess fuel while motorists refuel their vehicles.

C2.2d

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

In 2010, Dover conducted its first Climate Change Materiality Analysis, which included a review of climate change regulations, potential physical impacts related to climate change, and climate change-associated opportunities. We have continued to evaluate our climate change risks and opportunities on a regular basis and have developed an energy and climate change strategy that includes clearly defined goals and objectives, along with prioritized programs and projects for achieving energy use and greenhouse gas emissions reductions. We have committed to reducing our overall energy and greenhouse gas intensity indexed to net revenue by 20% from 2010 to 2020. All of our segments are investigating the energy efficiencies related to their operations and the use of their products and services by customers. To drive progress towards Dover's goal, each operating company has identified an Energy Efficiency Captain ("EEC"). Each EEC has developed a register of energy efficiency project opportunities, with over 200 projects identified since 2010. It is estimated that Dover has realized more than \$3.5M in annual energy and fuel cost savings from all projects implemented since 2010.

Dover recognizes that the greatest climate-related opportunity is related to our products and their ability to help customers improve their energy and carbon needs. Increased demand for low-carbon products could result in increased sales for a number of our businesses. Our businesses invest to develop innovative products as well as to upgrade and improve existing products to satisfy customer needs, expand revenue opportunities domestically and internationally, maintain or extend competitive advantages, improve product reliability and reduce production costs. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totaled approximately \$131 million and \$116 million, respectively.

Regarding potential physical risk, Dover maintains a list of all facilities that are owned or leased and the estimated value of each location. The majority of these facilities are located inland and have little flood or natural hazard risk. Any weather-related risks will be reflected in the facility's insurance amounts, determined by the property's insurance company. For a new facility, the Dover risk management will check if it is in a flood zone, and examine any potential natural hazards. We will continue to pursue energy efficiency reduction projects and capital equipment upgrades as needed, to minimize the impact of any existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located.

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?

Supply chain

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact

<Not Applicable>

Company- specific description

Increased pricing of GHG emissions could potentially result in increased costs for compliance for our businesses. Our businesses' domestic and international sales and operations are subject to risks associated with changes in laws, regulators and policies, including carbon emission regulations and energy efficiency and design regulations. Failure to comply with any of the foregoing could result in civil and criminal, monetary and non-monetary penalties as well as potential damage to our reputation. We cannot

provide assurance that our costs of complying with new and evolving regulatory reporting requirements and current or future laws will not exceed our estimates.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

An average carbon price of \$20 per metric tonne over the next 10-30 years, conservatively applied to all of Dover's Scope 2 emissions, could result in additional utility costs of \$4 million annually. This is less than 0.1% of Dover's annual revenue in 2018.

Management method

Dover tracks regulatory updates and evaluates potential risk for increased costs in high risk areas due to climate legislation or taxes. We attempt to control such costs through fixed-price contracts with suppliers and various other programs, such as our global supply chain activities.

Cost of management

0

Comment

There are no costs associated with regulatory tracking or supply chain activities; these are part of normal business activities.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Transition risk

Primary climate-related risk driver

Market: Increased cost of raw materials

Type of financial impact

<Not Applicable>

Company- specific description

We could lose customers or generate lower revenue, operating profits and cash flows if there are significant increases in the cost of raw materials (including energy) or if we are unable to obtain raw materials. We purchase raw materials, sub-assemblies and components for use in our manufacturing operations, which expose us to volatility in prices for certain commodities. Significant price increases for these commodities could adversely affect operating profits for certain of our businesses. While we generally attempt to mitigate the impact of increased raw material prices by hedging or passing along the increased costs to customers, there may be a time delay between the increased raw material prices and the ability to increase the prices of products, or we may be unable to increase the prices of products due to a competitor's pricing pressure or other factors. In addition, while raw materials are generally available now, the inability to obtain necessary raw materials could affect our ability to meet customer commitments and satisfy market demand for certain products. Consequently, a significant price increase in raw materials, or their unavailability, may result in a loss of customers and adversely impact our consolidated results of operations, financial condition and cash flows.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4430000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of supply chain interruption is provided as an order of magnitude estimate based on a percent of Dover's overall cost of goods and services. In 2018, the cost of goods and services equated to more than 60% of our gross revenue or \$4.43 billion. An increase of 1% in the cost of goods and services would result in a decrease in revenue of \$4.43 million. The actual financial impact due to a supply chain interruption could be higher or lower.

Management method

We use a wide variety of raw materials, primarily metals and semi-processed or finished components, which are generally available from a number of sources. As a result, shortages or the loss of any single supplier have not had, and are not likely to have, a material impact on operating profits. While the required raw materials are generally available, commodity pricing can be volatile, particularly for various grades of steel, copper, and select other commodities. Although cost increases in commodities may be recovered through increased prices to customers, our operating results are exposed to such fluctuations. We attempt to control such costs through fixed-price contracts with suppliers and various other programs, such as our global supply chain activities.

Cost of management

0

Comment

There are no costs associated with supply chain activities; these are part of normal business activities.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Technology: Unsuccessful investment in new technologies

Type of financial impact

<Not Applicable>

Company- specific description

Our operating results depend in part on the timely development and commercialization, and customer acceptance, of new and enhanced products and services based on technological innovation. The success of new and improved products, digital solutions and support services depends on their initial and continued acceptance by our customers. Certain of our businesses sell in industries that are characterized by rapid technological changes, frequent new product introductions, changing industry standards and corresponding shifts in customer demand, which may result in unpredictable product transitions, shortened life cycles and increased importance of being first to market. Failure to correctly identify and predict customer needs and preferences, to deliver high quality, innovative and competitive products to the market, to adequately protect our intellectual property rights or to acquire rights to third-party technologies and to stimulate customer demand for, and convince customers to adopt, new products and services could adversely affect our consolidated results of operations, financial condition and cash flows. In addition, we may experience difficulties or delays in the research, development, production and/or marketing of new products, digital solutions and support services which may prevent us from recouping or realizing a return on the investments required to continue to bring new products and services to market.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

69900000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of technology risk is provided as an order of magnitude estimate based on a percentage of Dover's revenue. Dover's revenue was \$6.99 billion in 2018. \$69.9 million is 1% of Dover's 2018 revenue.

Management method

We are committed to creating economic value for shareholders by developing products designed to help our customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In our Refrigeration & Food Equipment segment, SWEF, a manufacturer of brazed plate heat exchangers, focuses on the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.

Cost of management

47670000

Comment

The \$143 million spent on research and development for Dover was not all for our Refrigeration and Food Equipment Segment or low-carbon products. Dover does not disclose research and development spending per segment. Therefore, we have provided a cost that is one third of the total or \$47,670,000.

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?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Advanced Second Nature (SN) refrigeration system requires less refrigerant charge than standard refrigeration. Methodology for estimating avoided emissions from Advanced Second Nature Systems is provided here. Assumptions include: # of units sold, typical direct expansion (DX) system requires charge size of 1100 lbs with an average leak rate of 0.2 (20% recharge annually), and Advanced Second Nature (SN) system requires charge size of 600 with an average leak rate of 0.05 (5% recharge annually). Difference in emissions associated with typical DX and SN units multiplied by the number of units sold represents the avoided emissions. Hillphoenix's Second Nature line of natural refrigeration technology and energy-saving cases have helped ALDI, a leader in the grocery retailing industry, reach a sustainability milestone: Platinum GreenChill certification in 32 U.S. stores—with more to come. Platinum GreenChill is the U.S. Environmental Protection Agency's highest store-level sustainability certification for food retailers. Using Hillphoenix's line of alternative refrigeration systems is a key corporate responsibility initiative for ALDI. Second Nature Advansor CO2 Booster Systems have been installed in about 50 stores. They use carbon dioxide-based refrigerant with a global-warming potential (GWP) rating of 1. By comparison, a hydrofluorocarbon-based refrigerant can have a GWP rating as high as 3985. Also, in our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

69900000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of low-carbon product opportunities is provided as an order of magnitude estimate based on a percentage of Dover's revenue. Dover's revenue was \$6.99 billion in 2018. \$69.9 million is 1% of Dover's 2018 revenue. The actual revenue could be higher or lower.

Strategy to realize opportunity

Dover is committed to creating economic value for shareholders by developing products designed to help customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.

Cost to realize opportunity

47670000

Comment

The \$143 million spent on research and development for Dover was not all for our Refrigeration and Food Equipment Segment or low-carbon products. Dover does not disclose research and development spending per segment. Therefore, we have provided a cost that is one third of the total or \$47,670,000.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

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

Increased revenue through demand for lower emissions products and services

Company-specific description

Hydro Systems' proportioning, dosing and dispensing solutions contribute to the long-term well-being of people and the environment. Its products are used to accurately dilute and/or dispense concentrated cleaning chemicals so they can be safely and effectively used in commercial cleaning applications, such as: food service, health care, supermarket, institutional, school, building service contractor, and industrial markets. Hydro's products promote environmental-responsibility, cost control, worker safety, proper chemical performance - especially important in bacteria-control areas like retail-food and health care. The innovative EvoClean dispenser is the world's first venturi-based (the reduction in fluid pressure that results when a fluid flows through a constricted section of a pipe), water-powered dispenser for on-premise laundry applications. Unlike other laundry dispensers, EvoClean does not require squeeze tubes driving dramatic reductions in service parts and maintenance costs. Its delivery performance is precise, and it will not under-dose chemicals. This gives laundries, less downtime, less re-wash and more predictable, clean results with every wash. Hydro's EvoClean is 50% lighter than other traditional peristaltic pumps, leading to simplified installation and maintenance. The system is available in four, six and eight product configurations for two-flow rates. Users can even access reports that provide valuable data on product usage, costs per formula and more through the controller saving even more money and resources. Additional Sustainability Benefits include: Reduced Energy Consumption EvoClean uses 85% less energy than traditional laundry dispensers, because it does not use AC or DC motors. This equates to 38 kWh saved per year. Example Savings Calculation for Chemical Companies 9,000 locations x 2 dispensers average per location = 18,000 total EvoClean units 38 kWh x 18,000 units = 684,000 kWh /year

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

69900000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of low-carbon product opportunities is provided as an order of magnitude estimate based on a percentage of Dover's revenue. Dover's revenue was \$6.99 billion in 2018. \$69.9 million is 1% of Dover's 2018 revenue. The actual revenue could be higher or lower.

Strategy to realize opportunity

Dover is committed to creating economic value for shareholders by developing products designed to help customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste.

Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In our Refrigeration & Food Equipment segment, SWEPE, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.

Cost to realize opportunity

47670000

Comment

The \$143 million spent on research and development for Dover was not all for our Fluids Segment or low-carbon products. Dover does not disclose research and development spending per segment. Therefore, we have provided a cost that is one third of the total or \$47,670,000.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Belvac machinery and manufacturing technologies lead the world in the reduction of aluminum usage in beverage containers making more cans and bottles with less metal while maintaining strength and durability. In addition to the reduction in overall global aluminum usage, Belvac's light weighting efforts in aluminum beverage containers make them more affordable and, in turn, they displace more of the usage of glass containers which have a significantly less successful recycling processes. Aluminum is 100% recyclable and has the highest recycling rates. A twelve-ounce aluminum can also have approximately 45% lower associated emissions than a twelve-ounce glass bottle and 49% lower associated emissions than a twenty-ounce plastic bottle.

Time horizon

Current

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

69900000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of low-carbon product opportunities is provided as an order of magnitude estimate based on a percentage of Dover's revenue. Dover's revenue was \$6.99 billion in 2018. \$69.9 million is 1% of Dover's 2018 revenue. The actual revenue could be higher or lower.

Strategy to realize opportunity

Dover is committed to creating economic value for shareholders by developing products designed to help customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation

presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.

Cost to realize opportunity

47670000

Comment

The \$143 million spent on research and development for Dover was not all for our Refrigeration and Food Equipment Segment or low-carbon products. Dover does not disclose research and development spending per segment. Therefore, we have provided a cost that is one third of the total or \$47,670,000.

C2.5

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

	Impact	Description
Products and services	Impacted	As discussed above, Dover's low-carbon products have impacted our business. As another example, ice rinks across North America look to Hillphoenix to help "future proof" their facilities by moving to industrial refrigeration solutions with natural refrigerants. For example, our Advansor Direct Transcritical CO2 system for ice rinks delivers improved ice quality and pump power savings of up to 90% compared to traditional systems. HCFC-22 is frequently used as a refrigerant in ice rinks. Starting on January 1, 2020, U.S. production and import of HCFC-22 will end, so ice rinks across North America will be looking for opportunities to "future proof" their facilities by moving to natural refrigerants. CO2 is an entirely nontoxic, environmentally friendly refrigerant with excellent heat-transfer capabilities that meets every international refrigerant requirement for today and tomorrow. The Advansor Direct Transcritical CO2 system for ice rinks delivers superior performance — improved ice quality and pump power savings of up to 90% — compared to traditional systems. It's also environmentally friendly. CO2 is an entirely nontoxic, environmentally safe refrigerant with excellent heat-transfer capabilities. Plus, it's a fraction of the price of traditional refrigerants. Within retail refrigeration, we are focused on providing solutions to our customers that deliver energy efficiency and technology to enable them to effectively merchandise fresh and prepared food to help drive revenue and reduce costs. This is a key differentiator, as food retailers continue to focus on managing operating costs while also creating ways to distinguish themselves in their markets to drive growth. Among trends we see, many retailers are aggressively investing in closed-door refrigeration cases, energy-efficiency systems and specialized display cases. We hold a strong position in these categories and will continue to benefit as these trends continue.
Supply chain and/or value chain	Not yet impacted	We use a wide variety of raw materials, primarily metals and semi-processed or finished components, which are generally available from a number of sources. As a result, shortages or the loss of any single supplier have not had, and are not likely to have, a material impact on operating profits. While the required raw materials are generally available, commodity pricing can be volatile, particularly for various grades of steel, copper, aluminum and select other commodities. Although cost increases in commodities may be recovered through increased prices to customers, our operating results are exposed to such fluctuations. We attempt to control such costs through fixed-price contracts with suppliers and various other programs, such as our global supply chain activities.
Adaptation and mitigation activities	Impacted	We have identified impacts from mitigation activities. In order to mitigate our own GHG emissions and realize savings in operating costs, we have implemented numerous energy and GHG saving projects since 2010. While these current and future savings opportunities are meaningful, we do not consider them substantive in relation to the overall business. We have implemented more than 200 energy efficiency projects and realized more than \$3.5 million in annual savings since 2010.
Investment in R&D	Impacted	Dover is committed to creating economic value for shareholders by developing products designed to help customers meet their sustainability goals in response to evolving regulatory and environmental standards. We believe that sustainability-driven innovation presents a significant growth opportunity while contributing positively to enhanced resource efficiency and reduced waste. Accordingly, over the past several years, we have accelerated our efforts and processes around innovation, focusing on technologies that create tangible value for our customers. In our Refrigeration & Food Equipment segment, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.
Operations	Not impacted	We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. As an example of an indirect impact, the EU Emissions Trading System covers large emitters, many of which provide power or raw materials to Dover. As the cost for EU Allowances goes up for these large emitters, the pass through costs may rise.
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Impacted	For the year ended December 31, 2018, Dover revenue from continuing operations was \$7.0 billion, an increase of \$0.2 billion compared with the prior year. This increase included organic growth of 3.7%, a favorable impact from foreign currency of 0.8%, and acquisition-related growth of 0.5% partially offset by a 2.5% impact from dispositions. Organic growth was broad based across the Engineered Systems segment, with particular strength in our Printing & Identification platform and environmental solutions and defense businesses. In the Environmental Solutions business, Marathon Equipment is the leading manufacturer of waste handling and recycling equipment. The company's innovative solutions incorporate unprecedented green capabilities and provide breakthrough value. Every day, Marathon is proving that going green is savvy business. Marathon offers a complete line of revolutionary GreenBuilt trash compactors. Because GreenBuilt solutions get their power from solar panels, expenses associated with power installation and electrical charges are essentially eliminated. The units also utilize biodegradable oil and hydraulic fluids to help protect the environment.
Operating costs	Not impacted	We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. As an example of an indirect impact, the EU Emissions Trading System covers large emitters, many of which provide power or raw materials to Dover. As the cost for EU Allowances goes up for these large emitters, the pass through costs will rise. An average carbon price of \$20 per metric tonne over the next 7 years, conservatively, applied to all of Dover's Scope 2 emissions, could result in additional utility costs of \$4 million annually. These costs represent less than 0.1% of Dover's overall cost of goods and services in 2018.
Capital expenditures / capital allocation	Not impacted	We are aware of a number of existing or upcoming regulatory initiatives intended to reduce emissions in geographies where our manufacturing and warehouse/distribution facilities are located and have evaluated the potential impact of these regulations on our businesses. We anticipate that direct impacts from regulatory actions will not be significant in the short- to medium-term. We expect the regulatory impacts associated with climate change regulation would be primarily indirect and would result in "pass through" costs from energy suppliers, suppliers of raw materials and other services related to our operations. As an example of an indirect impact, the EU Emissions Trading System covers large emitters, many of which provide power or raw materials to Dover. As the cost for EU Allowances goes up for these large emitters, the pass through costs will rise.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	We are committed to creating value for our customers through the development of products that help our customers meet their sustainability goals. We have accelerated our efforts and processes around innovation, focusing on technologies which create tangible value for our customers. Our acquisition program has two key elements. As a first priority, we seek to acquire attractive add-on businesses with a strong fit that enhance our existing franchises either by increasing their reach and customer access, by broadening their product mix or by enhancing technological capability and customer value-add. Second, in the right circumstances, we may strategically pursue larger, stand-alone businesses that have the potential to either complement our existing businesses or allow us to pursue innovative technologies within our key growth spaces. With all our acquisitions, we seek businesses that have an accretive margin and a strong organic growth profile, offer significant synergy opportunities and the potential to generate double-digit return on capital 3-5 years after the acquisition is completed. Our future growth depends in large part on finding and acquiring successful businesses which expand the scope of our offering and make us a more important supplier to our customers. While we expect to generate annual organic growth of 3% to 5% over a long-term business cycle absent extraordinary economic conditions, our success in consistently growing the portfolio is also dependent on the ability to acquire and integrate businesses successfully within our existing structure.
Access to capital	Not impacted	Dover has not been impacted by potential risks or opportunities related to access to capital or capital allocation. We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Significant factors affecting liquidity are: cash flows generated from operating activities, capital expenditures, acquisitions, dispositions, dividends, repurchase of outstanding shares, adequacy of available commercial paper and bank lines of credit and the ability to attract long-term capital with satisfactory terms. We generate substantial cash from the operations of our businesses and remain in a strong financial position, with sufficient liquidity available for reinvestment in existing businesses and strategic acquisitions.
Assets	Not impacted	Dover evaluates the insurance risk with all facilities annually. Where facilities are at higher risk for natural catastrophes, additional insurance is purchased. These costs are not substantive to the business.
Liabilities	Not impacted	Dover has not identified any substantive risks or opportunities for climate-related liabilities.
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, but we anticipate doing so in the next two years

C3.1c

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

i. Dover is committed to driving shareholder returns through three key objectives. First, we are committed to achieving organic sales growth above that of gross domestic product (or 3% to 5% annually on average) over a long-term business cycle, absent prolonged adverse economic conditions, complemented by growth through strategic acquisitions. Second, we continue to focus on improving returns on capital and segment margins through effective cost management and productivity initiatives, including supply chain activities, targeted, thoughtful restructuring activities, strategic pricing and portfolio management. Third, we aim to generate free cash flow as a percentage of sales of approximately 8-12% through strong earnings performance, productivity improvements and active working capital management. Dover's value-creation strategy is supported by a financial policy that includes a prudent approach to financial leverage, and a disciplined approach to capital allocation that allows for a balance between reinvestment and return of capital to shareholders. We support achievement of these goals by (1) aligning management compensation with financial objectives, (2) executing on well-defined and actively managed merger and acquisition processes and (3) investing in talent development programs. Dover's three business segments focus on building enduring competitive advantages and leadership positions in end markets that are positioned for future growth. We believe that our businesses are among the top suppliers in most markets and niches that we serve (as defined by customer applications, geographies or products), which positions us well to capture future growth in such markets. We capitalize on our engineering, technology and design expertise and maintain an intense focus on meeting the needs of our customers and adding significant value to their operations through superior product performance, safety and reliability and a commitment to after sales and service support. We cultivate and maintain an entrepreneurial culture and continuously innovate to address our customers' needs to help them win in the markets they serve.

In particular, our businesses are well-positioned to capitalize on growing industrial manufacturing and trade volumes, continuous productivity improvement, adoption of digital technologies and the Industrial Internet of Things (IIoT), sustainability and safety, energy efficiency, consumer product safety and growth of the middle class and consumption in emerging economies. Our Engineered Systems segment combines its engineering capabilities, unique product advantages and niche applications expertise to address market needs and requirements including conversion to digital textile printing, productivity solutions, sustainability, consumer product safety and growth in emerging economies. For example, Marathon Equipment offers a complete line of revolutionary GreenBuilt trash compactors. Because GreenBuilt solutions get their power from solar panels, expenses associated with power installation and electrical charges are essentially eliminated. The units also utilize biodegradable oil and hydraulic fluids to help protect the environment. Our Fluids segment is focused on accelerating growth within the chemical/plastics, retail fueling, fluid transfer, industrial and hygienic markets as well as globalizing brands across geographies while expanding sales channels and engineering support. Specifically, we focus on capturing growth in the retail fueling, hygienic and pharma and polymers/plastics markets. Our Refrigeration & Food Equipment segment is responding to our customers' demand for increased energy efficiency and sustainability and unique merchandising solutions with innovative new products. For example, SWEP, a manufacturer of brazed plate heat exchangers, focuses on opportunities created by the conversion to sustainable and renewable energy usage in heat transfer. Their Passive Cooling Unit, for example, uses natural cooling from the ground or groundwater to remove excess heat from interiors with the process requiring only a small amount of electricity for the circulation pumps which make this solution both very energy efficient and cost effective.

We aim to grow by making organic investments in research and development, developing new products and technologies, expanding our geographic coverage, as well as by pursuing disciplined strategic acquisitions that enhance our portfolio and position Dover for long-term growth. We continually evaluate how our assets and capabilities can position Dover to grow in markets adjacent to our core businesses (for example, new applications, geographies, product segments or adjacent technologies) where Dover can be advantaged.

ii. Our third goal related to productivity is directly tied to our energy and carbon reduction target. Individual operating companies have productivity goals that include reduction in operating costs and energy efficiency is a primary focus.

iii. Our most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy include investment and research and development (R&D) related to low-carbon products. All of our operating companies assess the energy and carbon efficiencies related to their operations and the opportunities associated with the use of their products and services by customers on a regular basis to remain competitive. These opportunities have influenced our business strategy related to organic growth. Our businesses invest to develop innovative products as well as to upgrade and improve existing products to satisfy customer needs, expand revenue opportunities domestically and internationally, maintain or extend competitive advantages, improve product reliability and reduce production costs. During 2018, we prioritized innovation and research and development activities, spending \$143 million for research and development, including qualified engineering costs. For comparison, in 2017 and 2016, research and development spending totalled approximately \$131 million and \$116 million, respectively.

C3.1g

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

We have not seen the need for a formal climate-related scenario analysis to inform our business strategy. Our most substantial climate-related business impact relates to the business opportunities associated with our customers' demand for low-carbon products. Our segments and operating companies are keenly aware of the trends in their respective markets and respond accordingly through product innovation, acquisitions, or other measures. We serve thousands of customers, none of which accounted for more than 10% of our consolidated revenue in 2018. Given our diversity of served markets, customer concentrations are not significant. In addition, we use a wide variety of raw materials, primarily metals and semi-processed or finished components, which are generally available from a number of sources. As a result, shortages or the loss of any single supplier have not had, and are not likely to have, a material impact on operating profits. Given the diverse nature of our products, customers and suppliers, Dover does not anticipate any substantive negative impacts to its business related to climate change and therefore has not conducted scenario analysis.

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

Targeted % reduction from base year

20

Metric

Metric tons CO2e per unit revenue

Base year

2010

Start year

2010

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

0.0051

Target year

2020

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

100

Target status

Underway

Please explain

Revenue and energy usage for acquisitions and divestitures from 2011- 2018 have been added to and removed from the baseline year, respectively. As of December 2018, Dover has achieved a reduction in GHG intensity of 47% since 2010.

% change anticipated in absolute Scope 1+2 emissions

10

% change anticipated in absolute Scope 3 emissions

0

C4.2

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

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	
To be implemented*	1	0.7
Implementation commenced*	8	17.3
Implemented*	5	763
Not to be implemented	1	

C4.3b

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

Initiative type

Energy efficiency: Building services

Description of initiative

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

229

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

60000

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

166152

Payback period

4 - 10 years

Estimated lifetime of the initiative

6-10 years

Comment

Investment amount reflects incentives of \$26,788 at our DeStaco facility in Mt. Juliet, TN.

Initiative type

Energy efficiency: Building services

Description of initiative

HVAC

Estimated annual CO2e savings (metric tonnes CO2e)

466

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

98977

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

200000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment**Initiative type**

Energy efficiency: Building services

Description of initiative

Other, please specify (compressed air)

Estimated annual CO2e savings (metric tonnes CO2e)

68

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

29000

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

59500

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Investment reflects incentive of \$18,500 at our PSG facility in Grand Rapids, Michigan.

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

Method	Comment
Employee engagement	Our employees are constantly motivated to identify energy savings initiatives. Since 2011, Dover has realized more than 900 Mwh in energy savings from low to no cost behavioral programs.
Financial optimization calculations	Individual operating companies have pursued projects with favorable return on investment.

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

Product

Description of product/Group of products

Hillphoenix's Advanced Second Nature (SN) refrigeration system requires less refrigerant charge than standard refrigeration systems due to a smaller charge and lower leak rate. Methodology for estimating avoided emissions from Advanced Second Nature Systems is provided here. Assumptions include: # of units sold, typical direct expansion (DX) system requires charge size of 1100 lbs with an average leak rate of 0.2 (20% recharge annually), and Advanced Second Nature (SN) system requires charge size of 600 with an average leak rate of 0.05 (5% recharge annually). Difference in emissions associated with typical DX and SN units multiplied by the number of units sold represents the avoided emissions. Hillphoenix's Second Nature line of natural refrigeration technology and energy-saving cases have helped ALDI, a leader in the grocery retailing industry, reach a sustainability milestone: Platinum GreenChill certification in 32 U.S. stores—with more to come. Platinum GreenChill is the U.S. Environmental Protection Agency's highest store-level sustainability certification for food retailers. Using Hillphoenix's line of alternative refrigeration systems is a key corporate responsibility initiative for ALDI. Second Nature Advansor CO2 Booster Systems have been installed in about 50 stores. They use carbon dioxide-based refrigerant with a global-warming potential (GWP) rating of 1. By comparison, a hydrofluorocarbon-based refrigerant can have a GWP rating as high as 3985.

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

Other, please specify (Technology-specific calculations)

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

9

Comment

Methodology for estimating avoided emissions from Advanced Second Nature Systems is provided here. Assumptions include: # of units sold, typical direct expansion (DX) system requires charge size of 1100 lbs with an average leak rate of 0.2 (20% recharge annually), and Advanced Second Nature (SN) system requires charge size of 600 with an average leak rate of 0.05 (5% recharge annually). Difference in emissions associated with typical DX and SN units multiplied by the number of units sold represents the avoided emissions. Hillphoenix's Second Nature line of natural refrigeration technology and energy-saving cases have helped ALDI, a leader in the grocery retailing industry, reach a sustainability milestone: Platinum GreenChill certification in 32 U.S. stores—with more to come. Platinum GreenChill is the U.S. Environmental Protection Agency's highest store-level sustainability certification for food retailers. Using Hillphoenix's line of alternative refrigeration systems is a key corporate responsibility initiative for ALDI. Second Nature Advansor CO2 Booster Systems have been installed in about 50 stores. They use carbon dioxide-based refrigerant with a global-warming potential (GWP) rating of 1. By comparison, a hydrofluorocarbon-based refrigerant can have a GWP rating as high as 3985. Dover's Refrigeration and Equipment Segment represented 20% of Dover's overall revenue in 2018, or \$1.5 billion. The Refrigeration business represented 17% of Dover's overall revenue or \$1.2 billion in revenue. While Dover does not disclose revenue by product, for the purposes of this disclosure, it is assumed that half of the Refrigeration Segment revenue is related to low-carbon products, or 8.5 or 9% of revenue. This percentage is presented as indicative of the order of magnitude of low-carbon product revenue associated with the refrigeration business and is not the actual revenue. The actual revenue could be higher or lower.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

133344

Comment

Base year emissions have been updated annually with acquisitions and divestitures, including in 2018 to reflect the 2017 spin off of the Apergy business.

Scope 2 (location-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

164584

Comment

Base year emissions have been updated annually with acquisitions and divestitures, including in 2018 to reflect the 2017 spin off of the Apergy business.

Scope 2 (market-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

164584

Comment

In accordance with the The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), Scope 2 guidance, in the absence of market based emissions in the based year, location based emissions can be used as a proxy.

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)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

45985

Start date

January 1 2018

End date

December 31 2018

Comment

C6.2

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

Row 1

Scope 2, location-based

We are not reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Several SWEF sites in Sweden and Switzerland have contractual agreements for renewable energy purchases

C6.3

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

Reporting year

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

138381

Start date

January 1 2018

End date

December 31 2018

Comment

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

3427530

Emissions calculation methodology

Quantis Scope 3 calculator based on cost for goods and services.

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

0

Explanation

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

142259

Emissions calculation methodology

Quantis Scope 3 calculator based on capital expenses.

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

0

Explanation

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

49655

Emissions calculation methodology

Quantis Scope 3 Calculator using purchased energy data and facility square footage .

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

0

Explanation

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Emissions associated with upstream transportation and distribution are included in the estimate for Purchased Goods and Services above.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

8000

Emissions calculation methodology

Dover estimated the waste generated in operations using annual operating costs and the Quantis Scope 3 calculator.

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

0

Explanation

Dover estimated the waste generated in operations using the Quantis Scope 3 calculator. Emissions are less than 1% of Dover's overall Scope 3 emissions.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

19267

Emissions calculation methodology

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and/or The Climate Registry (TCR) were used to calculate emissions from employee air travel and rental cars. Activity data was available and based on the fuel type, mileage, and type of vehicle (for rental cars). TCR emission factors were used, and for employee air travel, depending on the distance travelled, the appropriate UK DEFRA emission factors were implemented. The IPCC Fifth Assessment Report's 100 year GWP's were used for all business travel.

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

100

Explanation

Employee commuting emissions are less than 1% of Dover's overall Scope 3 emissions.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

35232

Emissions calculation methodology

The number of employees per country was provided by Dover. The emissions were estimated based on the average distances traveled and the average hours worked per year across Organization for Economic Cooperation and Development (OECD) countries were taken from the OECD. The average transport split was determined using the sources including the US Census Bureau, Eurostat, Statistics Canada, Japanguide. com, Singapore Land Transport Authority, UK Government Statistics National travel Survey. Transport emission factors are taken from DEFRA (UK Government emission factors) and the US Federal Highway Administration.

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

0

Explanation

Employee commuting emissions are less than 1% of Dover's overall Scope 3 emissions.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

All leased assets are included in the Scope 1 and 2 emissions estimates. There are not additional upstream leased assets.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

426041

Emissions calculation methodology

Quantis Scope 3 Calculator using an industry average of 5% revenue spent on freight.

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

0

Explanation

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Dover does not sell intermediate products that require further processing, transformation, or inclusion in another product before use, and therefore result in emissions from processing subsequent to sale by the reporting company and before use by the end consumer.

Use of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

All leased assets are included in the Scope 1 and 2 emissions estimates. There are not additional upstream leased assets.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Dover does not have any franchises.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Dover does not have enough relevant investments or detail on any financial instruments to be able to report out.

Other (upstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

Other (downstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

C6.7

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

No

C6.10

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

Intensity figure

0.0026363

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

184366

Metric denominator

unit total revenue

Metric denominator: Unit total

6993379000

Scope 2 figure used

Market-based

% change from previous year

9.55

Direction of change

Decreased

Reason for change

The reason for decrease is due to Dover spinning off the Apergy business, which resulted in a larger decrease in total scope 1 and 2 emissions compared to the change in revenue. Note: The intensity value provided in 2018, was off by a factor of ten. It was reported as .033 but should have been .003. The change and reason for change provided in 2018 was still accurate.

C7. Emissions breakdowns

C7.1

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

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	45632	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	58	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	294	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)
Argentina	83.11
Belgium	1.63
Canada	405.74
China	943.68
Denmark	28.96
France	877.91
Germany	1058.46
India	33.82
Italy	770.1
Mexico	113.86
Netherlands	44.48
Brazil	43.91
Switzerland	199.75
Thailand	155.95
United Kingdom of Great Britain and Northern Ireland	1610.5
United States of America	39606.11
Poland	6.53

C7.3

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

By business division

By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Fluids Segment	9961.51
Refrigeration & Food Equipment	23381.11
Engineered Systems	12641
Corporate	0

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Combustion	29665
Mobile sources	3809
Refrigerants	12510

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Argentina		58	102	
Australia		507	300	
Belgium		175	450	
Brazil		414	2249	
Canada		718	1936	
China		30936	19793	
Czechia		89	73	
Denmark		536	1034	
Dominican Republic		381	345	
France		652	5599	
Germany		4211	3961	37
India		1372	682	
Italy		1319	2033	
Malaysia		5562	4047	
Mexico		1875	2305	
Netherlands		582	601	
Singapore		97	135	
Slovakia		0	12618	12618
Spain		0		
Sweden		35	15430	14630
Switzerland		114	913	
Thailand		36	34	
United Kingdom of Great Britain and Northern Ireland		3998	5106	
United States of America		84618	174208	
Poland		95	129	

C7.6

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

- By business division
- By activity

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)
Fluids Segment	43911.05	
Refrigeration & Food Equipment Segment	48282.59	
Engineered Systems	45983.57	
Corporate	203.79	

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Purchased Energy		138381

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	2708	Increased	11	Sites have increased their Renewable Energy usage
Other emissions reduction activities		<Not Applicable>		
Divestment	5336	Decreased	4	The reason for the decrease, is Dover spun off the Apergy company
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?

Market-based

C8. Energy

C8.1

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

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

C8.2

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

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

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)		158161	158161
Consumption of purchased or acquired electricity	<Not Applicable>	27299	236615	263822
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
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>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	27299	394755.92	422075

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

141

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Fuel Oil Number 2

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

920

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

149675

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

Fuels (excluding feedstocks)

Propane Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

7424

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

<Not Applicable>

Comment

C8.2d

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

Diesel

Emission factor

267

Unit

kg CO2e per MWh

Emission factor source

WRI GHG Protocol Guidance, sourced from IPCC 2006, Tables 1-3; <http://www.ghgprotocol.org/calculation-tools/all-tools>

Comment

Fuel Oil Number 2

Emission factor

279

Unit

kg CO2e per MWh

Emission factor source

WRI GHG Protocol Guidance, sourced from IPCC 2006, Tables 1-3; <http://www.ghgprotocol.org/calculation-tools/all-tools>

Comment

Natural Gas

Emission factor

202

Unit

kg CO2e per MWh

Emission factor source

WRI GHG Protocol Guidance, sourced from IPCC 2006, Tables 1-3; <http://www.ghgprotocol.org/calculation-tools/all-tools>

Comment

Propane Gas

Emission factor

227

Unit

kg CO2e per MWh

Emission factor source

WRI GHG Protocol Guidance, sourced from IPCC 2006, Tables 1-3; <http://www.ghgprotocol.org/calculation-tools/all-tools>

Comment

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

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

Low-carbon technology type

Hydropower

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

Europe

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

27299

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

0

Comment

C9. Additional metrics

C9.1

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

C-TO9.6/C-TS9.6

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

C10. Verification

C10.1

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

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

C10.1a

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

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Moderate assurance

Attach the statement

20190726_Assurance statement Dover_v0.1.pdf

Page/ section reference

All pages

Relevant standard

A1000AS

Proportion of reported emissions verified (%)

70

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Moderate assurance

Attach the statement

20190726_Assurance statement Dover_v0.1.pdf

Page/ section reference

All pages

Relevant standard

A1000AS

Proportion of reported emissions verified (%)

70

C10.1b

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

Scope

Scope 3- at least one applicable category

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

20190726_Assurance statement Dover_v0.1.pdf

Page/section reference

All pages.

Relevant standard

AA1000AS

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
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	AA1000	The year on year change in CO2e emissions for Scopes 1 and 2 from 2017 were verified. 20190726_Assurance statement Dover_v0.1.pdf

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)?

No, and we do not anticipate being regulated in the next three years

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, but we 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, our customers

C12.1a

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

Type of engagement

Compliance & onboarding

Details of engagement

Other, please specify (Code of conduct)

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% Scope 3 emissions as reported in C6.5

100

Rationale for the coverage of your engagement

Dover's Supplier Code of Conduct requires all suppliers to comply with all applicable environmental laws, regulations, and standards and minimize any adverse impact on the environment. In addition, Dover's suppliers must also endeavor to conserve natural resources and energy and reduce or eliminate waste and the use of hazardous substances. "Suppliers" means any company, corporation, or other entity or person that sells, or seeks to sell, goods or services to Dover, including the supplier's employees, other workers, representatives, agents, subcontractors, and other sub-tier sources. Dover requires its suppliers to read, understand, and follow the Supplier Code of Conduct to ensure compliance with the Code. Suppliers are required to cooperate with inspections, audits, and investigations by Dover or its authorized agents. Prior to engaging in business or during an existing business relationship, Dover may conduct diligence on its suppliers and their owners and key personnel to assess compliance with the Supplier Code of Conduct and address Dover's business needs.

Impact of engagement, including measures of success

Dover's due diligence activities confirm compliance with the Supplier Code of Conduct. This includes requirements to comply with all applicable environmental laws, regulations, and standards and minimize any adverse impact on the environment. Dover's suppliers must also endeavor to conserve natural resources and energy and reduce or eliminate waste and the use of hazardous substances.

Comment

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

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

% of customers by number

20

% Scope 3 emissions as reported in C6.5

20

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

While many Dover products enhance our customers climate change performance and strategy, the products in our Refrigeration and Food Equipment Segment have some of the most significant energy and carbon efficiency properties. Dover's product and sales teams engage with customers in this segment regarding product features and relevant certification schemes. The Refrigeration and Food Equipment Segment represents 20% of Dover's revenue in 2018, therefore we are estimating 20% of customers for engagement and 20% of Scope 3 emissions. This estimate is likely low since it does not account for engagement strategies in Dover's other segments for energy and carbon efficient products.

Impact of engagement, including measures of success

Dover measures success of customer engagement through sales of its products. The Refrigeration and Food Equipment Segment represents 20% of Dover's revenue in 2018.

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?

Trade associations

C12.3b

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

No

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?

Dover's representative to the National Association of Manufacturers is a member of the Executive Management team. As such, the representative is aware of Dover's overall climate change strategy and position.

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

NYSE_DOV_2018.pdf

Dover 2019 Proxy statement.pdf

Page/Section reference

Content elements

Governance

Strategy

Risks & opportunities

Emission targets

Other metrics

Comment

The other metrics include energy reduction targets.

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	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	6992118

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	2600031080

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

Kellogg Company

Scope of emissions

Scope 1

Allocation level

Business unit (subsidiary company)

Allocation level detail

The emissions provided are based on an estimate of Markem-Imaje's 2018 revenue from Kellogg's, approximately \$750,000. Markem-Imaje's revenue in 2018 was approximately \$1 billion. 2018 revenue from Kellogg's represents less than 0.1% of Markem-Imaje's 2018 revenue. 0.1% of Markem- Imaje's 2018 Scope 1 emissions is 273 metric tonnes of CO2e.

Emissions in metric tonnes of CO2e

273

Uncertainty (±%)

10

Major sources of emissions

Major sources of emissions include boilers and motor vehicles.

Verified

Yes

Allocation method

Other, please specify (Annual revenue)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources have been identified using the method of operational control.

Requesting member

Kellogg Company

Scope of emissions

Scope 2

Allocation level

Business unit (subsidiary company)

Allocation level detail

The emissions provided are based on an estimate of Markem-Imaje's 2018 revenue from Kellogg's, approximately \$750,000. Markem-Imaje's revenue in 2018 was approximately \$1 billion. 2018 revenue from Kellogg's represents less than 0.1% of Markem-Imaje's 2018 revenue. 0.1% of Markem- Imaje's 2018 Scope 2 emissions is 524 metric tonnes of CO2e.

Emissions in metric tonnes of CO2e

524

Uncertainty (±%)

10

Major sources of emissions

Purchased electricity.

Verified

Yes

Allocation method

Other, please specify (Annual revenue)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources have been identified using the method of operational control.

Requesting member

L'Oréal

Scope of emissions

Scope 1

Allocation level

Business unit (subsidiary company)

Allocation level detail

The emissions provided are based on an estimate of Markem-Imaje's 2018 revenue from L'Oreal, approximately \$2 million. Markem-Imaje's revenue in 2018 was approximately \$1 billion. 2018 revenue from L'Oreal represents approximately 0.2% of Markem- Imaje's 2018 revenue. 0.2% of Markem- Imaje's 2018 Scope 1 emissions is 548 metric tonnes of CO2e.

Emissions in metric tonnes of CO2e

548

Uncertainty (±%)

10

Major sources of emissions

Boilers and motor vehicles.

Verified

Yes

Allocation method

Other, please specify (Annual revenue)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources have been identified using the method of operational control.

Requesting member

L'Oréal

Scope of emissions

Scope 2

Allocation level

Business unit (subsidiary company)

Allocation level detail

The emissions provided are based on an estimate of Markem-Imaje's 2018 revenue from L'Oreal, approximately \$2 million. Markem-Imaje's revenue in 2018 was approximately \$1 billion. 2018 revenue from L'Oreal represents approximately 0.2% of Markem- Imaje's 2018 revenue. 0.2% of Markem- Imaje's 2018 Scope 2 emissions is 1048 metric tonnes of CO2e.

Emissions in metric tonnes of CO2e

1048

Uncertainty (±%)

10

Major sources of emissions

Purchased electricity.

Verified

Yes

Allocation method

Other, please specify (Annual revenue)

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources have been identified using the method of operational control.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	Markem-Imaje products and customers are diverse and manufacturing occurs in multiple, global locations. Overcoming challenges to allocation would require dedicated manufacturing strategies or detailed life cycle analysis.
Customer base is too large and diverse to accurately track emissions to the customer level	Markem-Imaje products and customers are diverse and manufacturing occurs in multiple, global locations. Overcoming challenges to allocation would require dedicated manufacturing strategies or detailed life cycle analysis.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

Markem-Imaje products are diverse and are manufactured in multiple, global locations. Overcoming challenges to allocation would require dedicated manufacturing strategies or detailed life cycle analysis. These activities are not cost effective for the business.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

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	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms