

C0. Introduction

C0.1

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

Thermo Fisher Scientific Inc. ("Thermo Fisher" or the "Company") is the world leader in serving science, with revenues of \$20.9 billion and more than 70,000 employees in 50 countries. Through our premier brands - Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services - we offer an unmatched combination of innovative technologies, purchasing convenience and comprehensive support. As such, we measure success not just by our financial performance, but also by the way we are making a difference in the world – for our customers, our colleagues and our communities. Our Mission as a Company is to enable our customers to make the world healthier, cleaner and safer. Whether they're discovering new treatments for disease, understanding climate change or protecting citizens from harm, our customers rely on Thermo Fisher to help them find answers to some of the most pressing issues of our time. Everything we do starts with our customers, because if we do right by them, all of our stakeholders will benefit.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	Yes	3 years
Row 2	January 1 2016	December 31 2016	<Not Applicable>	<Not Applicable>
Row 3	January 1 2015	December 31 2015	<Not Applicable>	<Not Applicable>
Row 4	January 1 2014	December 31 2014	<Not Applicable>	<Not Applicable>

C0.3

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

Australia
Austria
Belgium
Canada
China
Czechia
Democratic People's Republic of Korea
Denmark
Finland
France
Germany
India
Israel
Italy
Japan
Lithuania
Malaysia
Mexico
Netherlands
New Zealand
Norway
Singapore
Spain
Sweden
Switzerland
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) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Other, please specify (Sr. Vice President and General Counsel)	The Sr. Vice President and General Counsel oversees the risk management and Environmental, Health & Safety function at Thermo Fisher. The full Board of Directors considers climate-related issues both annually in the context of its enterprise risk management and as the need arises.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies	Enterprise risk management is presented to the board annually. This presentation includes climate change risk as it pertains to weather pattern risks for the company's operations globally.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Risk manager <i>Vice President, Risk Manager</i>	Assessing climate-related risks and opportunities	Annually

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.

These positions sit in the Legal department which oversees the Risk Management and EHS function for the company. These positions perform these functions globally for the company. All of these functions are engaged in the sustainability of the company.

Asset-related and weather-related risks are managed on a corporate-wide basis by the risk management department. In the case of acquisitions, the Company completes a risk assessment during the due diligence process so that potential risks are known prior to purchase. For example, the handling of sulfur hexafluoride by a potential acquisition was identified and investigated during the due diligence process and the risk analysis was completed prior to acquisition. Weather-related risk assessments use models and insurance industry information and focus on protecting Company assets (factories) from weather-related events that appear to be increasing in frequency and severity as a result of climate change. The necessity of this evaluation process was underscored by the impact hurricanes had on the company's facilities in Puerto Rico and Houston last year. These events helped spur us to develop more comprehensive and multidisciplinary emergency preparedness and disaster response plans.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Risk manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

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	1	4	this short-term definition comes from the company's operating budget terms
Medium-term	5	9	This falls outside of annually reviewed budget timelines but within the long-term set goals of the company.
Long-term	10	11	This timeline corresponds to the company's long-term vision goals

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	Annually	3 to 6 years	The company believes that climate change is accelerating and that current risk models are not taking that into account in their calculations.

C2.2b

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

The Company incorporates many aspects of climate change into its multi-disciplined risk management approach, which considers risks from a regulatory, customer behavioral, reputational, and weather-related perspective. Some of these risks are managed at a corporate level while some are handled at a business unit level.

Regulatory risks are managed at businesses that may have affected products and product lines. Risks and opportunities are generally assessed annually as part of the product development plans that are developed for the following year. These risks and opportunities are then periodically assessed throughout the product development process. This has led to the continuation of the Green Leaf program that helps our customers reduce their CO2 emissions via; reducing the need for hazardous chemicals, streamlining packaging, sustainable packaging, energy efficiency and sustainable disposal capabilities.

Customer behavioral risk is managed by the Company's marketing departments both at a corporate and business level. These employees are tasked with understanding customer concerns and monitoring for changes in behavior. The duties of the marketing team include being responsive to customer requests for information regarding sustainability and greenhouse gas mitigation. Responding to these requests is a collaborative effort between marketing and the corporate social responsibility office.

The Company's corporate social responsibility strategy encompasses three primary elements: business sustainability, employee engagement and philanthropic giving. As part of the business sustainability strategy energy, water and waste metrics are monitored for potential opportunities to decrease the company's overall carbon footprint. In 2017 the data collection process expanded to include scope 3 emissions for the company with plans to further grow this data collection in future years in anticipation of future GHG reduction efforts.

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	There are a number of regulations that affect operational facility building codes in areas prone to climate risk. Currently the company's sites in Sweden are subject to regulation around carbon emissions. The country of Sweden is attempting to become carbon neutral and therefore has and is continuing to expect carbon reductions by all parties in the country.
Emerging regulation	Relevant, sometimes included	Thermo Fisher anticipates more robust global regulation around GHG emissions due to the Paris Agreement. Because the company operates in 50 countries around the world , many of which are attempting to reduce their carbon emissions operations in those locations will be subject to legislation .
Technology	Relevant, always included	Technology plays a large role in the company's business continuity plan.
Legal	Relevant, always included	The company has a fiduciary responsibility to shareholders and part of that duty is to manage risk in the company's portfolio. Climate change will effect how asset risk is managed.
Market	Relevant, sometimes included	The company considers market risk to be partially driven by reputational risk. If the company is seen as not responsive to perception of climate change there is a risk of financial impact.
Reputation	Relevant, always included	Reputation is important as it can determine market-share and customer loyalty based on company perception as it pertains to climate change
Acute physical	Relevant, always included	The company has a program for periodic inspection of facilities in order to ensure they are prepared to withstand climate related threats .
Chronic physical	Relevant, sometimes included	Risks are primarily vetted around weather shifts and changing building system needs to ensure sites adapt to the those shifts.
Upstream	Relevant, not included	The company does see the supply chain as an area of risk and plans to expand supplier engagement on climate change risks in the future.
Downstream	Relevant, not included	The company believes that this is a relevant metric and are working toward including these downstream metrics in the future. These metrics will include customer usage and disposal of consumable product lines and diversion of products at end-of-life from landfill

C2.2d

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

The Company prioritizes risks that could potentially have an impact on the business, both from a financial impact as well as from a reputational risk standpoint. Generally speaking, these are regulatory risks. Most regulatory risks and opportunities are considered material at the business unit level if they have the ability to affect a product or product design in the pipeline, will increase operating costs to the point where margins are eroded, affect the reputation of the business, its products or services, or require capital investment above the maximum that the general manager of a factory can approve. Significant risks and opportunities that have the ability to have a material financial impact on a business would be reported to senior leadership on a quarterly basis (or sooner).

The following are examples of specific risks and the processes we use to manage them.

If we fail to capitalize on an opportunity to provide our customers with the products they need to manage and comply with climate-change driven regulation then we are at risk of losing business to those of our competitors who are developing such products. We mitigate this risk by having the highest research and development budget in the industry. The company is always looking for ways to improve and innovate in order to meet our customers' compliance and regulatory-driven demands.

Our supply chain is at risk due to climate change related circumstances and it is possible that they will not be able to supply us with the raw materials we need to manufacture our products. We seek to diversify our supply chain so that our ability to manufacture a product will not be adversely affected if any one supplier is unable to provide the necessary raw materials.

Climate change related disruption occurred at the company in 2017 when production was impacted at sites affected by hurricane Maria. The company continues to improve its disaster recovery plans, which in some cases include provisions to move production to an alternative location until an impacted facility is able to return to production.

Our long-term business strategy around the construction of new facilities has been influenced by climate change. The Company has an overall strategy to consolidate smaller, less efficient operations into larger more efficient Centers of Excellence.

Representatives of the Company's air quality instruments business sit on the board of the Institute of Clean Air Companies (ICAC), the national association of companies that supply air pollution monitoring and control systems, equipment, and services for stationary sources. We also work with major Washington, D.C. based manufacturing and business associations to ensure that they're advocating U.S. climate policies that are pragmatic and technologically feasible. The Company is a member of the Environment Working Group of BUSINESSEUROPE and is a member of the National Air Quality Reference Laboratories Association (AQUILA). In China, we are an active member of the China Association of Environmental Protection Industry, China Society for Environmental Science and the Am Cham China Environmental Industry Forum for technology exchange and policy advocacy. We also work closely with the U.S. Embassy in Beijing and the U.S.-China Energy Cooperation Program to participate in seminars and conferences together with peer companies to provide tools, methods and solutions for regional governments and industry leaders to solve environmental issues that they are facing. Thermo Fisher also participated in the environmental policy and standards discussions with China's Ministry of Environmental Protection and its affiliate agencies on topics including energy conservation in the petrochemical and power industries, environmental protection in shale gas development, air quality monitoring technologies and applications, VOCS pollution control, and water pollution treatments.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

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

Type of financial impact driver

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

With the rise in global temperatures the company anticipates there will be a greater need for climate control within operational facilities. This will involve greater strain on cooling systems and a need for greater efficiency within those systems.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Potential financial impact

1000000

Explanation of financial impact

The financial impact will occur when cooling systems will need to be installed or upgraded for greater capacity and/or efficiency.

Management method

Maintenance of all current cooling systems and budget for future installation and upgrade of systems.

Cost of management

1000000

Comment

This is an estimate of per year cost to maintain systems, including man hours and repairs to installed equipment.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)

Company- specific description

In 2017 the company had assets in Puerto Rico that were affected by hurricane Maria. Because of this extreme weather event the company's production was affected which led to loss of revenue and necessary repairs to the company's facilities.

Time horizon

Current

Likelihood

More likely than not

Magnitude of impact

Low

Potential financial impact

1000000

Explanation of financial impact

The total financial impact for the disruption caused by the hurricane is still in flux as the Company is still engaged in rebuilding and preparedness efforts.

Management method

The company has rebuilt the sites in Puerto Rico with greater awareness of potential future risk. This includes contingency plans and back-up systems in place.

Cost of management

1

Comment

These systems are still being put in place so the cost of management is not yet known.

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

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

Type of financial impact driver

Other, please specify (Regulatory Instrumentation)

Company- specific description

Thermo Fisher produces products which help customers to identify and monitor effects of global warming such as air quality, water quality, and other measures of global warming that can be scientifically observed. These products will become more necessary and the market is expected to grow as GHG regulation increases around the world.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Potential financial impact

1

Explanation of financial impact

The financial impact is not yet known since these are forward looking statements.

Strategy to realize opportunity

Thermo Fisher spends significant money annually on research and development, the highest in the industry. The total spent in 2017 was \$888M.

Cost to realize opportunity

888000000

Comment

2017 annual research and development budget was \$888M

C2.5

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

	Impact	Description
Products and services	Impacted	The opportunity lies in the ability of the company's products and services to enable customers to comply with regulation or study the effects of climate change. For instance when customers are studying ice cores for clues to future global temperature fluctuations.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	The risk associated with products and services lies in the supply chain. If there is a climate change impacted event that inhibits a supply chain item that could impact the company negatively. For instance when Puerto Rico was hit by hurricane Maria it impacted our water instrumentation business because production of vital machine parts was hindered .
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	The company's instrumentation is enabling scientists to study climate change. The list of the company's products used by scientists is too long for this answer.
Investment in R&D	Impacted	The company invested \$888 billion in R&D in 2017. This is one of the highest R&D budgets in the industry. That budget goes to developing many products that are then used by scientists studying climate change, air quality, water pH, food safety, and other public health research that can be tied back to climate change.
Operations	Impacted for some suppliers, facilities, or product lines	Operations in certain places have the potential to be impacted by climate change as the company saw in 2017 during the hurricane season, wildfires, and flooding.
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Impacted	Make and push energy efficiency to drive revenue. This includes energy efficiency initiatives and waste reduction efforts at the company's sites.
Operating costs	Impacted	Costs tied to climate risks (eg., energy costs, insurance, capital expenditures, capital in AOP). For instance at the site in Lenexa, Kansas efficiency was achieved by reducing water and electricity usage at the site by investing in new equipment.
Capital expenditures / capital allocation	Impacted	Capital expenditures are key to the upkeep of all facilities. Cap ex. is used to update building systems to mitigate climate change risk. LED lighting upgrades , HVAC improvements all usually are funded by capital expenditure.
Acquisitions and divestments	Impacted	The due diligence process includes an assessment of operational facilities' exposure to climate related risk.
Access to capital	Not impacted	This has not factored in to the company's financial planning process for this topic.
Assets	Not evaluated	Real asset risk is covered under our operations risk statement above. We do not anticipate near term risk from financial assets.
Liabilities	Not evaluated	The company's liabilities as stated in the annual report are currently not determined to be affected by climate change at this time.
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?

Yes, qualitative and quantitative

C3.1c

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

Climate change is integrated into the Company's short-term and long-term business strategies. Short-term strategies focus on product-related issues, regulatory risks and opportunities, and weather-related risks. Long-term strategies are related to the Company's corporate social responsibility program, which is tasked with ensuring business sustainability. Both short-term and long-term strategies are linked to the Company's emission reduction targets. After a period of evaluation and baseline solidification, the Company, endorsed by the leadership team, in 2014, established emission reduction targets for its global operations. The establishment of this multi-year target has been the most substantial business decision made to influence climate strategy. Through the adoption of this target, the Company leadership team has solidified the Company's commitment to sustainability and set an organizational expectation for continuous improvement in operational efficiencies and reducing the impact the business has on the environment.

The GHG emissions reduction goal of 5% on an intensity basis was surpassed by year-end 2016. The company continued to reduce scope 1 and 2 emissions in 2017 compared to the original included sites that reported data in 2015. Because a higher percentage of our sites has been included in our report for 2017, the company is reporting a higher emissions number than last year. With the reduction goal fulfilled we are working to set a new emissions reduction target within the next year.

Short-term strategies are woven into the Company's business processes related to product development, annual operating plans, and plant operations/efficiencies. The most important aspects of the short-term strategy are related to managing regulatory risk and opportunity around the Company's products. These strategies are developed by cross-functional teams and, in some cases, through external collaborations. The Company is helping China improve its air quality with The Freedom System uses the Company's unique atomic fluorescence technology, providing continuous monitoring of stack gases to detect mercury levels down to parts per trillion.

Short-term strategies around plant operations and product development are enhanced by Practical Process Improvement (PPI). Our PPI Business System is a core operational discipline that supports business productivity, operational efficiency and sustainable growth. Through PPI-driven initiatives the Company has boosted productivity and reduced waste as a result of implementing electrical efficiency programs, developing reusable packaging, increasing recycling and reducing landfill impact, and improving space efficiency to reduce the need for new buildings as the Company grows.

Our long-term business strategy around the construction of new facilities has been influenced by climate change. The Company has an overall strategy to consolidate smaller, less efficient operations into larger more efficient Centers of Excellence. Additional long-term strategy managed by the corporate social responsibility function includes managing opportunities to enhance the Company's reputation. This process is managed through periodic meetings of key employees. Externally, voluntary reporting is accomplished by the Company's corporate social responsibility report. The Company has continued to offer assistance to victims of natural disasters, including matching employee donations and hands-on volunteering through our community outreach teams. This program is thought to be increasingly important as climate change may be increasing the frequency of weather-related events such as hurricanes, wildfires and other catastrophic events. The long-term strategy to manage reputational opportunities through corporate social responsibility provides several competitive advantages. One of which is a commitment to reducing our GHG emissions so we can align with larger reduction efforts in a favorable and scientific way.

C3.1d

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

Climate-related scenarios	Details
Other, please specify (internal business strategy)	The Company realizes the need to capitalize on opportunities presented by climate change. Analysis is done on the current and potential market for Thermo Fisher products and how that may and will be impacted by climate change driven regulation and compliance needs as well as customer preference. Part of Thermo Fisher's strategy to innovate is to anticipate the needs of products to serve customer needs in new and emerging markets.

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

90

% reduction from baseline year

0

Metric

Metric tons CO2e per unit revenue

Base year

2015

Start year

2015

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

23.16

Target year

2020

Is this a science-based target?

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

% achieved (emissions)

0

Target status

Underway

Please explain

The company set a greenhouse gas reduction target in 2015 to reduce emissions 5% over 5 years. That target sunsets in 2020. We have achieved the 5% intensity based reduction as of year end 2016. In 2017 our emissions total increased for the first time since the establishment of our target. This is due to an increase in data coverage and accuracy and are working to re-establish our commitment to emissions reduction.

% change anticipated in absolute Scope 1+2 emissions

5

% change anticipated in absolute Scope 3 emissions

100

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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	19	284.5
To be implemented*	24	1177.77
Implementation commenced*	26	958.3
Implemented*	8	182.03
Not to be implemented	0	0

C4.3b

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

Activity type

Energy efficiency: Building services

Description of activity

Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

12.56

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

36559

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

71500

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Variable Frequency Drive installation

Activity type

Other, please specify (Demand Response)

Description of activity

<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

30000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Activity type

Low-carbon energy installation

Description of activity

Fuel Cells

Estimated annual CO2e savings (metric tonnes CO2e)

10

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

17751

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

0

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Activity type

Energy efficiency: Building services

Description of activity

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

24.7

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

75306

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

206360

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

LED retrofits

Activity type

Energy efficiency: Building services

Description of activity

HVAC

Estimated annual CO2e savings (metric tonnes CO2e)

143.6

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

139543

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

110583

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Activity type

Other, please specify (Asset Management)

Description of activity

<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)

1.1

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

11638

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

9800

Payback period

<1 year

Estimated lifetime of the initiative

1-2 years

Comment

C4.3c

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

Method	Comment
Employee engagement	In 2015, the Company established an environmental sustainability team. The team was focused on aligning the PPI Business System tools with environmental sustainability opportunities to drive systemic cost reduction and improved environmental performance across the Company. In 2017 a new team was formed to look at potential new GHG emissions reduction targets for the company upon successful execution of the first target set. In 2017, our Lenexa, Kansas, site initiated several efficiency projects that helped reduce its water usage and CO2 emissions by 25 percent and 75 percent respectively. Lenexa's culture of Involvement was instrumental in driving the improvements. For example, an engineering colleague suggested the innovative idea of recirculating hot water back through the production system, thereby reducing water consumption while using less energy in the process –delivering a double win for the environment. Colleagues are also empowered to continuously identify leakage in the pipes running throughout the facility so that they can be sealed to minimize waste. Employee engagement, along with the installation of energy-efficient equipment, helped the site increase business productivity while also improving resource efficiency.
Compliance with regulatory requirements/standards	The Carbon Reduction Commitment program is driving carbon reduction efforts (energy surveys, lighting retrofits, motor upgrades, etc.) in the U.K. In addition, governments in the U.K. and Germany have added mandatory facility energy survey programs to help businesses identify site-related efficiency project opportunities. Sweden is striving to be the first country to be 100% fossil fuel free. Since 2015, our sites throughout Sweden have implemented the following initiatives to reduce their overall environmental impact: Construction of biological wastewater treatment plant that treats 70,000 cubic meters of water annually. Construction of a BREEAM* certified distribution center in 2017. Provision of 22% of the sites' power usage by renewable energy sources—approx. 2,645 MWh. Installation of 5 electric vehicle charging stations and installing of insulated windows.
Financial optimization calculations	The Company consults with third parties on emission reduction projects and these projects are reviewed internally. Detailed cost/savings and environmental impact analyses are performed, including investigation of the availability of utility rebates, federal and/or state incentives, and energy pricing escalation. Part of that project is using the vendors to help us accurately track GHG data throughout the year and make it available for site leads to use internally to improve their energy efficiency and reduce overhead costs.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products

Description of product/Group of products

Green Leaf products - By incorporating principles of green chemistry and green engineering into our product design, we are minimizing chemical hazards, increasing reaction efficiency, and minimizing waste. Our greener product alternatives can help advance sustainability in the lab by minimizing the use of hazardous chemicals, minimizing waste and material consumption, and increasing energy efficiency. Over 4,900 new green leaf SKUs were added in 2016 increasing the Company's total number of green leaf products available to almost 8,000. At the end of 2016 the company's TSX (an ultra-low temperature freezer that reduces energy consumption and CO2 emissions by 50% compared to conventional freezers by using a natural, SNAP compliant, refrigerant) became the first ENERGY STAR certified laboratory-grade refrigerator available on the market. The company made a pledge to the White House to reduce the use of HFCs by transitioning its entire cold storage platform to more environmentally friendly, natural refrigerants. This transition will take place over a five year period ending in 2020, and will provide a 49% reduction in CO2 emissions. In that same time period, the Company also plans to reduce the energy consumption of these products by more than 50%.

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

Low-carbon product and avoided emissions

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

Other, please specify (EPA GHG Equivalencies Calculator)

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

7

Comment

Level of aggregation

Group of products

Description of product/Group of products

ACT Label, a new lab products label developed by My Green Labs, certification for several NUNC brand products.

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 (A.C.T.)

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

0.05

Comment

ACT was a new eco-label developed by My Green Lab for laboratory consumable products in 2017. Thermo Fisher was one of the early adopters of this label and anticipate the products certified by this label to grow as the certification becomes more robust.

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 2015

Base year end

December 31 2015

Base year emissions (metric tons CO2e)

92458

Comment

Scope 2 (location-based)

Base year start

January 1 2015

Base year end

December 31 2015

Base year emissions (metric tons CO2e)

301234

Comment

Scope 2 (market-based)

Base year start

January 1 2015

Base year end

December 31 2015

Base year emissions (metric tons CO2e)

0

Comment

we do not calculate emissions via market-based methodology

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?

Row 1

Gross global Scope 1 emissions (metric tons CO2e)

70255

End-year of reporting period

<Not Applicable>

Comment

calendar year 2017

Row 2

Gross global Scope 1 emissions (metric tons CO2e)

83529

End-year of reporting period

2016

Comment

Row 3

Gross global Scope 1 emissions (metric tons CO2e)

92458

End-year of reporting period

2015

Comment

Row 4

Gross global Scope 1 emissions (metric tons CO2e)

91083

End-year of reporting period

2014

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

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

Comment

We report a location-based scope 2 emissions figure because in North America all scope 2 emissions are reported on by utilities via the location-based calculation. The majority of our sites and square footage is situated in North America so at this time that remains the reporting standard. If it were to update to the market-based calculation we would be happy to report on that figure.

C6.3

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

Row 1

Scope 2, location-based

408244

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

<Not Applicable>

Comment

calendar year 2017

Row 2

Scope 2, location-based

305579

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2016

Comment

Row 3

Scope 2, location-based

301234

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2015

Comment

Row 4

Scope 2, location-based

308402

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2014

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?

Yes

C6.4a

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

Source

The source of these emissions that are within the reporting boundary but not included in the scope 1 & 2 emissions reporting are sites whose square footage is below 20,000 SF.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why the source is excluded

The source is excluded because the accumulated square footage of all sites below 20,000 SF is less than 10% of the company's total SF.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company is looking for ways to engage with the supply chain in the future.

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

This is a scope 3 metric that we anticipate reporting on in the future.

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

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

We do not engage in these activities significantly outside of travel and shipping. These two activities are reported in the company's scope 3 total this year.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

This would be part of a future engagement plan with supply chain partners.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company is collecting waste data from operational facilities and does believe this is a relevant metric. The goal is to expand data retrieval and accuracy of the data to create an accurate target for reduction.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

159371

Emissions calculation methodology

EPA GHG emissions calculator applied to 2017 travel data via motor vehicle and air travel.

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

100

Explanation

All data was provided by third party vendors

Employee commuting

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company plans to begin calculating employee commuting impact in next year's report.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company does not own any upstream leased assets

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

47622.9

Emissions calculation methodology

Reports provided by 3rd party vendors

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

100

Explanation

The company was able to get shipping reports from the largest shipping vendors we engage to ship products all over the world.

Processing of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company currently engages with customers regarding consumables sold and used by the customer and proper disposal. We do offer limited specialized recycling capability for some products as well as take-back and trade in programs for larger equipment. We do not yet have a company or product-wide policy .

Use of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company currently engages with customers regarding consumables sold and used by the customer and proper disposal. We do offer limited specialized recycling capability for some products as well as take-back and trade in programs for larger equipment. We do not yet have a company or product-wide policy .

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company currently engages with customers regarding consumables sold and used by the customer and proper disposal. We do offer limited specialized recycling capability for some products as well as take-back and trade in programs for larger equipment. We do not yet have a company or product-wide policy.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

That is not a relevant metric for our business.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

The company does not have an franchise model, therefore this metric is not applicable to our business model

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

This metric is not applicable to our business model

Other (upstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

Other (downstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

Emissions calculation methodology

N/A

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

Explanation

C6.7

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

No

C6.10

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

Intensity figure

23.69

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

478499

Metric denominator

unit total revenue

Metric denominator: Unit total

20200000000

Scope 2 figure used

Location-based

% change from previous year

22

Direction of change

Increased

Reason for change

The reason for the emissions increase in 2017 is attributed to our efforts around better and more comprehensive data collected from the Company's global sites, including data from acquired assets. When a YoY comparison is done between 2016 and 2017 both scope 1 and 2 totals were reduced. Combined, the reduction in emissions in 2017 over 2016 was more than 40,000 metric tons of CO2. This is attributable to a combination of consistent efforts to increase energy efficiency across the company including equipment upgrades, employee awareness training and efforts to consolidate to centers of excellence. Specifically, our site in Lenexa Kansas was able to reduce their scope 2 kwh by 25%. All of these efforts were guided by the company's commitment to ongoing greenhouse gas emissions reduction.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CH4	33.43	IPCC Fourth Assessment Report (AR4 - 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)
Australia	21
Austria	10
Belgium	410
Canada	718
China	42
Czechia	414
Denmark	424
Finland	327
France	518
Germany	1343
India	728
Italy	424
Lithuania	1158
Malaysia	1
Mexico	99
Netherlands	196
New Zealand	257
Norway	114
Republic of Korea	109
Sweden	277
Switzerland	1106
United Kingdom of Great Britain and Northern Ireland	8021
United States of America	43433

C7.3

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

By business division

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Analytical Instruments	3962
Corporate Offices	374
Laboratory Products and Services	16708
Life Sciences Solutions	32717
Specialty Diagnostics	16495

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)
Australia	1756			
Belgium	1712			
Canada	3480			
China	15585			
Czechia	6949			
Denmark	8728			
Finland	6770			
France	2899			
Germany	20722			
India	925			
Israel	430			
Italy	1258			
Japan	1146			
Lithuania	6060			
Malaysia	313			
Mexico	13532			
Netherlands	1566			
New Zealand	2931			
Norway	65			
Singapore	7451			
South Korea	317			
Spain	102			
Sweden	4192			
Switzerland	21513			
United Kingdom of Great Britain and Northern Ireland	31824			
United States of America	246019			

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Analytical Instruments	46139	
Specialty Diagnostics	67276	
Laboratory Products and Services	180058	
Life Sciences Solutions	109914	
Corporate Offices	4858	

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	13949	Increased	2	We are generating more renewable electricity at sites at around the world and determined to capture those renewable kwh
Other emissions reduction activities		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions	8453	Increased	1	We added buildings now part of the portfolio from an acquisition
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary	89393	Increased	22	The boundary changed for the 2017 reporting year because of efforts to increase CO2 data acquisition from sites. We were able to increase the amount of square footage reporting throughout the company which gives greater visibility into overall emissions.
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 5% but less than or equal to 10%

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	Please select
Consumption of purchased or acquired cooling	Please select
Generation of electricity, heat, steam, or cooling	Yes

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)		388249.23	388249.23
Consumption of purchased or acquired electricity	<Not Applicable>		548555.4	548555.4
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>	
Total energy consumption	<Not Applicable>		936804.63	936804.63

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	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

388249.23

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

388249.23

MWh fuel consumed for self-generation of steam

112

MWh fuel consumed for self-generation of cooling

MWh fuel consumed for self- cogeneration or self-trigeneration

765

C8.2d

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

Natural Gas

Emission factor

1020

Unit

metric tons CO2 per million Btu

Emission factor source

EPA

Comment

C8.2e

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	18743.53	18743.53	18743.53	18743.53
Heat				
Steam				
Cooling				

C8.2f

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

C9. Additional metrics

C9.1

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

C10. Verification

C10.1

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

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

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?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

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

Yes

C11.1a

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

UK carbon price floor

C11.1c

(C11.1c) Complete the following table for each of the tax systems in which you participate.

UK carbon price floor

Period start date

June 1 2016

Period end date

June 1 2017

% of emissions covered by tax

6

Total cost of tax paid

636153.37

Comment

C11.1d

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

Thermo Fisher uses a third party vendor to collect and aggregate the carbon emissions given off by our facilities in the U.K. Our Energy procurement team is always looking for ways to reduce the amount of carbon-based fuels used at facilities located in the U.K. in order to Offset the amount of tax paid.

Schedule E - Carbon Monitoring Service

This Schedule forms part of the Energy Management Services Agreement between NUS Consulting Group and the Client. Moreover, this Schedule sets forth the terms and conditions under which NUS shall provide the Client access to Carbon Monitoring module include within the NUSdirect System. All defined terms and expressions in the Agreement shall have the same meaning in this Schedule, unless inconsistent with the context, or unless specifically indicated to the contrary.

NUS shall provide Carbon Monitoring services described in detail below commencing on the Effective Date and continuing until the termination or expiration of the Agreement.

1. Statement of Work:

1.1. NUSdirect Carbon Management Module:

1.1.1. NUS's on-line energy data management system is located at www.nusdirect.com – (“NUSdirect” or the “NUSdirect System”). NUSdirect is a secure site with access restricted to persons with a valid username and password. NUS will undertake all reasonable efforts to make the NUSdirect System available to authorized users on a 24/7 basis, except for periods of scheduled maintenance.

1.1.2. Client shall be granted access to the Carbon Management module contained within NUSdirect which shall provide the following functionality at the account, group or individual site level:

1.1.3. conversion of Energy invoice data (specifically energy consumption data) into Scope 1 (direct) and Scope

2 (indirect) Green House Gas (GHG) emissions – this conversion is undertaken using supplier fuel mix/emissions data except in the US where e-Grid data issued by the US Environmental Protection Agency is utilized;

3.1.3.1. tracking total GHG emissions against a benchmark/baseline;

3.1.3.2. monthly and annual Scope 1 emissions tracking;

3.1.3.3. monthly and annual Scope 2 emissions tracking;

3.1.3.4. monthly and annual CO2 emissions tracking; and

3.1.3.5. building emissions analysis tools, including emissions breakdown by source, building ranking tool, building ranking by emissions intensity and emissions efficiency rating (i.e., emissions per floor area)

1.1.4. The NUSdirect System is capable of storing and converting Scope 3 emission data (i.e., other indirect emissions including travel in non-owned or controlled vehicles, waste disposal, etc.). Upon Client request, NUS can periodically enter Scope 3 data provided by Client into Client's energy database.

C11.2

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

No

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our customers

Yes, other partners in the value chain

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)

Size of engagement

25

% Scope 3 emissions as reported in C6.5

5

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

The Company has started presenting a slide deck of products in our Green Leaf label to our marketing staff and certain customers. This is an effort that is expected to grow in the future.

Impact of engagement, including measures of success

The Green Leaf product line is responsible for 7% of the Company's revenue annually. The hope is that when more customers are made aware of the Company's greener alternatives that they will see it as way to achieve their own environmental sustainability goals

C12.1c

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

Thermo Fisher regularly engages the company's employees by raising awareness about environmental sustainability and enabling individuals to plan, implement, and participate in energy efficiency initiatives. Some of our sites around the world have employee-led Green Teams that identify opportunities to enhance energy efficiency, reduce waste, and raise awareness among their colleagues.

Additionally, Thermo Fisher offers incentives and encourages employees to engage in behaviors that reduce greenhouse gas emissions such as carpooling, using electric vehicles, and taking public transit. One example is an employee bike share program at the Hillsboro, Oregon site.

Thermo Fisher engages with external partners as well. Last year, the company joined the global ICE MEMORY initiative, led by the Fondation Universite Grenoble Alpes. Thermo Fisher's spectrometry and chromatography instruments are assisting scientists in the initiative to analyze glacial ice cores in order to gain a better understanding of past and future climate change.

C12.3

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

- Direct engagement with policy makers
- Trade associations

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify	Support	Representatives of the Company's air quality instruments business sit on the board of the Institute of Clean Air Companies (ICAC), the national association of companies that supply air pollution monitoring and control systems, equipment, and services for stationary sources. We also work with major Washington, D.C. based manufacturing and business associations to ensure that they're advocating U.S. climate policies that are pragmatic and technologically feasible. The Company is a member of the Environment Working Group of BUSINESSEUROPE and is a member of the National Air Quality Reference Laboratories Association (AQUILA). In China, we are an active member of the China Association of Environmental Protection Industry, China Society for Environmental Science and the Am Cham China Environmental Industry Forum for technology exchange and policy advocacy. We also work closely with the U.S. Embassy in Beijing and the U.S.-China Energy Cooperation Program to participate in seminars and conferences together with peer companies to provide tools, methods and solutions for regional governments and industry leaders to solve environmental issues that they are facing. Thermo Fisher also participated in the environmental policy and standards discussions with China's Ministry of Environmental Protection and its affiliate agencies on topics including energy conservation in the petrochemical and power industries, environmental protection in shale gas development, air quality monitoring technologies and applications, VOCS pollution control, and water pollution treatments. Beyond the U.S., EU and China, the Company is also engaged with foreign governments to deploy upgraded national air quality monitoring systems.	The Company works with legislators, regulators, trade associations and industry to ensure that the most effective public policies, regulations, and directives are implemented to control and mitigate harmful emissions.

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?

The government relations department communicates engagement activities as required to employees involved in climate change strategy development and implementation.

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 voluntary sustainability report

Status

Complete

Attach the document

2017 CSR Report FLR.pdf

Content elements

Governance

Strategy

Emissions figures

Emission targets

Other metrics

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Sr. Vice President and General Counsel	Other, please specify (Legal)

SC. Supply chain module

SC0.0

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

Thermo Fisher Scientific Inc. ("Thermo Fisher" or the "Company") is the world leader in serving science, with revenues of \$20.9 billion and more than 70,000 employees in 50 countries. Through our premier brands - Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services - we offer an unmatched combination of innovative technologies, purchasing convenience and comprehensive support. As such, we measure success not just by our financial performance, but also by the way we are making a difference in the world – for our customers, our colleagues and our communities. Our Mission as a Company is to enable our customers to make the world healthier, cleaner and safer. Whether they're discovering new treatments for disease, understanding climate change or protecting citizens from harm, our customers rely on Thermo Fisher to help them find answers to some of the most pressing issues of our time. Everything we do starts with our customers, because if we do right by them, all of our stakeholders will benefit.

SC0.1

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

	Annual Revenue
Row 1	20200000000

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	8835561023

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

Abbott Laboratories

Scope of emissions

Scope 1

Emissions in metric tonnes of CO₂e

553

Uncertainty (±%)

10

Major sources of emissions

fuel combustion

Verified

No

Allocation method

Other, please specify (percentage of revenue)

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

The customer's percentage of CO₂ emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO₂ emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO₂ emission responsibility.

Requesting member

Abbott Laboratories

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

3212

Uncertainty (±%)

10

Major sources of emissions

electricity usage

Verified

No

Allocation method

Other, please specify (Revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

Bristol-Myers Squibb

Scope of emissions

Scope 1

Emissions in metric tonnes of CO2e

425

Uncertainty (±%)

10

Major sources of emissions

fuel combustion for heating and cooling

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

Bristol-Myers Squibb

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

2471

Uncertainty (±%)

10

Major sources of emissions

electricity from utilities for on site operations

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

Johnson & Johnson

Scope of emissions

Scope 1

Emissions in metric tonnes of CO2e

786

Uncertainty (±%)

10

Major sources of emissions

fuel combustion for heating and cooling

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

Johnson & Johnson

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

4566

Uncertainty (±%)

10

Major sources of emissions

electricity from utilities for on site operations

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

U.S. General Services Administration (GSA)

Scope of emissions

Scope 1

Emissions in metric tonnes of CO2e

904

Uncertainty (±%)

10

Major sources of emissions

fuel combustion for heating and cooling

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

Requesting member

U.S. General Services Administration (GSA)

Scope of emissions

Scope 2

Emissions in metric tonnes of CO2e

5255

Uncertainty (±%)

10

Major sources of emissions

electricity from utilities for on site operations

Verified

No

Allocation method

Other, please specify (revenue)

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

The customer's percentage of CO2 emission responsibility was calculated by using their spend on Thermo Fisher products in 2017. There are limitations to this methodology in that some products have larger carbon footprints than others. In the future, ideally, we will be able to determine CO2 emissions based on products and product lines purchased by the customer which will be a much more accurate accounting of the customer's actual CO2 emission responsibility.

SC1.2

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

The company does not publish the amount of money that a customer spends on our products annually anywhere that is public. The Company's annual revenue as well as the divisional breakdown is published in the 10-K published earlier this calendar year.

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	The company manufactures and sells such a diverse set of products whose market price fluctuates constantly. I would need a full-time analyst to attempt to parse out product's market and CO2 emissions value
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	A standardized methodology for calculating emissions.

SC1.4

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

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Collaborate across departments to achieve greater detail on type of products sold to each customer and begin to base the emissions number on actual product lines instead of overall revenue.

SC2.1

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

Requesting member

Abbott Laboratories

Group type of project

Other, please specify (share supply chain engagement methods)

Type of project

Other, please specify

Emissions targeted

Actions that would reduce our own supply chain emissions (our own scope 3)

Estimated timeframe for carbon reductions to be realized

3-5 years

Estimated lifetime CO2e savings

1000000

Estimated payback

Other, please specify (Unsure)

Details of proposal

Thermo Fisher is looking for ways to engage with our supply chain around CO2 emissions. We would love to discuss best practices with you in your efforts to engage with your supply chain. What has worked and what hasn't so that we can put an engagement plan in place.

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 2018-2019 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2017-2018 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services, if so, what functionality will you be using?

No, I am not providing data

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

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	Non-public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms