

C0. Introduction

C0.1

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

Thermo Fisher Scientific Inc. (also referred to in this document as “Thermo Fisher,” “we,” the “Company,” or the “registrant”) is the world leader in serving science. Our Mission is to enable our customers to make the world healthier, cleaner and safer. Whether our customers are accelerating life sciences research, solving complex analytical challenges, increasing productivity in their laboratories, improving patient health through diagnostics or the development and manufacture of life-changing therapies, we are here to support them. Our global team delivers an unrivaled combination of innovative technologies, purchasing convenience and pharmaceutical services through our industry-leading brands, including Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific, Unity Lab Services, Patheon, and PPD. For more information, please visit www.thermofisher.com.

As the world leader in serving science, we understand the important role we play in improving lives worldwide as we help our customers diagnose disease, develop new treatments, protect our planet and keep people safe. This defines us as a Company and inspires our global colleagues to bring their best every day. Learn more about our initiatives in our 2022 Corporate Social Responsibility Report.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1 2022

End date

December 31 2022

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

4 years

Select the number of past reporting years you will be providing Scope 2 emissions data for

4 years

Select the number of past reporting years you will be providing Scope 3 emissions data for

1 year

C0.3

(C0.3) Select the countries/areas in which you operate.

Argentina
Australia
Austria
Belgium
Brazil
Bulgaria
Canada
Chile
China
Colombia
Costa Rica
Croatia
Czechia
Denmark
Finland
France
Germany
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Latvia
Lithuania
Luxembourg
Malaysia
Mexico
Netherlands
New Zealand
Norway
Pakistan
Peru
Philippines
Poland
Portugal
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Serbia
Singapore
Slovakia
South Africa
Spain
Sweden
Switzerland
Taiwan, China
Thailand
Turkey
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States Minor Outlying Islands
United States of America
Viet Nam

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 chosen approach for consolidating your GHG inventory.

Operational control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a CUSIP number	883556 10 2
Yes, a Ticker symbol	NYSE: TMO

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 or committee	Responsibilities for climate-related issues
Board-level committee	The Nominating and Corporate Governance Committee (N&CG Committee) of the Board of Directors oversees corporate governance, priorities, risks and external reporting related to corporate social responsibility (CSR) matters, and political spending strategy, including those related to climate.
Board-level committee	The Audit Committee oversees financial reporting, systems and internal controls, cybersecurity, regulatory, compliance and litigation risks, and SEC reporting related to CSR matters.

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	Scope of board-level oversight	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Overseeing and guiding employee incentives Reviewing and guiding strategy Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement Reviewing and guiding the risk management process 	<Not Applicable >	<p>The Nominating and Corporate Governance Committee (N&CG Committee) oversees corporate governance, priorities, risks and external reporting related to CSR matters, and political spending strategy. In 2022, the Committee reviewed the Company's corporate social responsibility progress and key initiatives including a review and endorsement of the new 2030 greenhouse gas reduction target.</p> <p>In coordination with the N&CG Committee, the Audit Committee of the Board oversees public disclosures on these matters in the Company's SEC filings as well as the data quality related to such reporting.</p> <p>The Compensation Committee oversees risks related to compensation practices, pay for performance (including non-financial ESG strategic targets), and talent management and succession planning of executive officers.</p> <p>The Science and Technology Committee advises the Board on new and emerging innovations, markets and applications of Company products, and receives updates on matters involving bioethics and the use of our technologies.</p> <p>Enterprise risk management is presented to the Board of Directors annually, following an extensive cross-functional review, and includes climate change risk as appropriate. Individual risk topics are presented to the Board of Directors and its committees, as applicable during regularly scheduled meetings.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	We have at least two board members with competence on climate-related issues: <ul style="list-style-type: none">• Ruby Chandy serves on the Environmental, Health, Safety and Sustainability Committee at DuPont de Nemours• R. Alexandria Keith is the Executive Sponsor for Corporate Sustainability at Procter & Gamble	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee

Other, please specify (Senior Vice President, Global Business Services)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Finance - CFO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

This position oversees the climate program, including the implementation of policies and monitors progress against our climate-related targets.

Position or committee

Other committee, please specify (Company Leadership Team)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Managing climate-related acquisitions, mergers, and divestitures
Providing climate-related employee incentives
Conducting climate-related scenario analysis
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Shares ownership and accountability for delivering on our CSR strategy and presents our ESG priorities, progress and annual global enterprise risk management program to the Board.

Position or committee

Other committee, please specify (Steering Committee)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Managing public policy engagement that may impact the climate
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

Oversees CSR implementation and includes our chairman, president and CEO, as well as key executives with responsibility for functions, businesses and programs critical to advancing our social and environmental commitments, targets and roadmaps. The committee conducts a formal program review at least twice annually.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Our annual bonus determinations include non-financial strategic metrics (weighted at 30%), including ESG priorities such as progress on our greenhouse gas emission reduction goals.

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).

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

For 2022, 18% of the CEO's target compensation was an annual incentive based on performance goals tied 70% to financial measures, and 30% to non-financial strategic measures, including making progress on our greenhouse gas emissions reduction goals.

See our 2023 Proxy statement (Form DEF 14A) for additional details.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

This incentive is linked to progress toward our SBTi validated Scope 1 + 2 absolute reduction target.

Entitled to incentive

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Our Corporate Executive Team's annual variable, performance-based incentive is based on performance goals tied 70% to financial measures, and 30% to non-financial strategic measures, including making progress on our greenhouse gas emission reduction goals.

See our 2023 Proxy statement (Form DEF 14A) for additional details.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

This incentive is linked to progress toward our SBTi validated Scope 1 + 2 absolute reduction target.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

One component of the annual variable, performance-based incentive for all eligible employees is based on performance goals tied non-financial measures, including making progress on our greenhouse gas emission reduction goals.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

This incentive is linked to progress toward our SBTi validated Scope 1 + 2 absolute reduction target.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	This short-term definition comes from the Company's operating budget terms.
Medium-term	3	10	This falls outside of annually reviewed budget timelines but within the long-term set goals of the Company.
Long-term	10		This timeline corresponds to the Company's long-term vision goals.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

A substantive strategic impact on our business is defined in our risk management process as follows: can increase operating costs to the point where margins are eroded; affect the reputation of the business, its products or services.

Our risk assessment process includes both a quantitative and qualitative assessment of risks and opportunities. From a quantitative perspective, we evaluate risks and opportunities based on their potential impact on certain key financial statement amounts and operating results (e.g., assets, revenues, earnings, cash flow, etc.). From a qualitative perspective, we evaluate risks and opportunities based on the consideration of all other relevant facts and circumstances, including potential impact and probability of occurrence.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

A specific climate-related risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

To inform our enterprise risk management process of any specific risks and opportunities posed by climate change and/or the transition to a low-carbon economy, we review insurance reports outlining flooding, wildfires and extreme weather risks for Company sites. Site specific mitigation plans are developed to manage identified risks. In 2022, Thermo Fisher spent approximately \$1.6 million related to these plans.

In 2023, we conducted our first climate scenario analysis using the Climonomics platform, which identifies and assesses climate-related risks through modelling the organization’s properties to quantify the effect of various impacts under different scenarios and across the coming decades. We plan to integrate this analysis into our enterprise risk management process to better understand the potential impact of physical and transitional risks across low-, medium- and high-case scenarios based on the Intergovernmental Panel on Climate Change’s Representative Concentration Pathways.

Urgent action is needed to avoid the worst impacts of climate change and we have prioritized the environment both as core to our Mission and integral to our business and sustainability strategies. In 2022, the Company announced a new 2030 greenhouse gas emissions reduction target to cut Scope 1 and 2 emissions from operations by more than 50% from a 2018 baseline. This climate target fulfils our pledge to align our climate strategy with the Paris Agreement to limit global temperature increase to 1.5°C and represents an important milestone in our pursuit of a net-zero value chain by 2050, which includes Scope 1, 2 and 3 targets that have been validated by the SBTi.

To manage climate-related risks and opportunities, we have integrated net-zero into our business strategy as follows:

- Transitioning away from fossil fuels and accelerating the adoption of renewable electricity to power our facilities. By the end of 2022, more than 150 Thermo Fisher sites across the globe used 100% renewable electricity. Additionally, we entered into two agreements—one with Enel North America and one with EDF Renewables—that will enable us to power all of our current US sites with 100% renewable electricity by 2026.
- Engaging with 90% of suppliers—our largest source of Scope 3 emissions—by spend, to set science-based targets by 2027. To help reduce emissions across our global value chain, we launched our climate engagement program for suppliers in 2022. To date, 13% of our suppliers by spend have set a science-based target, and another 10% have committed to set a science-based target.
- Designing products with the environment in mind. Our ENERGY STAR-certified products and greener product alternatives help scientists advance sustainability in the lab by minimizing the use of hazardous chemicals, decreasing waste and material consumption, and increasing energy efficiency.

As our roadmap evolves, we continue to frame our approach toward a broader range of emissions sources such as our fleet, waste generation, transportation and business travel. With insights in these areas, our colleagues and other stakeholders are critical partners in helping us achieve our goals.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As our business operates around the world, we are subject to numerous regulations, some of which are climate-related. As an example, we are subject to the UK Climate Change Levy regulation that places a carbon tax on our energy consumption in that country.
Emerging regulation	Relevant, always included	As our business operates around the world, we are subject to numerous regulations, some of which are climate-related. With increased scrutiny around climate, we anticipate growth in climate-related regulations that will impact our business. An example is the sales ban of new fossil fuel-powered vehicles in the EU after 2035. Thermo Fisher currently operates over 5,000 vehicles in that region requiring a strategic change in our sourcing of vehicles as we look to the future.
Technology	Relevant, always included	We strive to provide customers with innovative products that meet their needs. As the climate becomes a larger criterion in the eyes of our customers, we need to be aware of technological advances in measurement, energy efficiency, refrigerants, or plastics, that can be incorporated into our product offerings or used to create new product offerings.
Legal	Relevant, always included	With increasing US and EU government regulation specific to climate-related claims and financial reporting, the heightened potential for litigation must be monitored and managed appropriately.
Market	Relevant, always included	Our customers are outlining the importance of environmental sustainability criteria as part of their sourcing decisions. We must actively monitor and meet the requirements of these criteria as well as our competitors to maintain the demand for our products and services.
Reputation	Relevant, always included	The manner in which we address our climate performance, including whether we meet our targets or not, could adversely affect our corporate reputation, potentially diminishing our brand value in the perceptions of customers, investors, colleagues, and potential employees, impacting talent attraction and retention.
Acute physical	Relevant, always included	The risk of extreme weather events to our facilities continues to evolve. The Company has a program for periodic inspection and audit of facilities to ensure they are prepared to withstand acute climate-related threats.
Chronic physical	Relevant, always included	Our facilities might face new or heightened chronic climate-related risks, such as extreme heat and water scarcity, due to the long-term shifts in local temperatures and weather patterns.

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 & Primary climate-related risk driver

Acute physical	Wildfire
----------------	----------

Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

We review insurance reports outlining flooding, wildfires and extreme weather risks for Company sites. These risks include increased wildfire exposure in California where the Company has many manufacturing locations. Wildfires can impact both facilities directly and potentially lead to operational shutdowns due to smoke, compromised air quality, and the need for workforce evacuations. The Company faces the risk of hurricanes and rising coastal flooding in Puerto Rico, Florida, North Carolina, and South Carolina, all attributed to sea level rise. Finally, the Company faces flooding risks at several locations worldwide, including traditional river flooding and surface water intrusion into facilities. These risks seem to be becoming more common as weather events increase in severity. While the majority of our sites are located in areas with low risk or are prepared for extreme weather risks, we did identify some requiring mitigation plans. To manage the identified risks, site-specific mitigation plans were developed.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact is a combination of the amount of self-insured risk the Company takes in the form of deductibles and self-insured retentions and an estimate of impact for which there is no insurance coverage available in the market (e.g., reputational risk, permanent loss of business, etc.)

Cost of response to risk

1600000

Description of response and explanation of cost calculation

To manage identified physical risks associated with short-term extreme weather-related risks, site-specific mitigation plans are developed. In 2022, nearly 30 risk improvements were undertaken across our global operations, resulting in a reduced loss expectancy of approximately \$308 million USD. The most significant risk improvement activities were the continued roofing and window upgrades to improve resilience against windstorms at one of our largest sites in North Carolina. Other improvements included (but not limited to) flood and wind resilience projects at sites in Italy and Puerto Rico, respectively.

Comment

As our evaluation identifies new and evolved risks, site-specific mitigation plans may be created or adjusted as needed. Additional spend may be required in those cases.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
---------------------	---------------------------

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In the medium-term carbon taxes are forecasted to increase in coverage and price, specifically:

- As we serve customers globally, a Carbon Border Adjustment Mechanism may be applied to some materials imported into the EU.
- As we operate globally, an international carbon pricing floor as promoted by the International Monetary Fund (IMF) and World Trade Organization (WTO) would impact our operations not already impacted by carbon pricing mechanisms.
- Existing carbon pricing mechanisms are noted as needing to increase to meet the Paris Agreement temperature goals, as less than 4% of global emissions are currently covered by a direct carbon price within the range needed by 2030.

Findings based on The World Bank. 2022. "State and Trends of Carbon Pricing 2022" (May), World Bank, Washington, DC. Doi: 10.1596/978-1-4648-1895-0. License: Creative Commons Attribution CC BY 3.0 IGO.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

An example financial impact would use a range of 0.005 to 0.020 USD per KWH of fossil fuel energy purchased (representing a carbon tax of around USD 25 to 100 per metric ton of carbon dioxide) and represents per year financial impacts. Total fossil fuel consumption in 2022 for Thermo Fisher was roughly 1,500,000,000KWH.

Cost of response to risk**Description of response and explanation of cost calculation**

Our climate strategy consists of transitioning away from the use of fossil fuels while accelerating the adoption of new wind and solar facilities, both on and off-site. Twenty sites achieved fossil fuel-free status in 2022, eliminating this risk for those sites. Our strategic action plan through 2030 includes allocation of investments for net-zero infrastructure-related capital expenses across all global operations, as well as investments for operational expenses to achieve our targets.

Comment

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Upstream

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Our climate strategy includes accelerating the adoption of renewable electricity. Through the power purchasing agreement (PPA) model, we can support the installation of these new facilities and acquire renewable electricity to meet our climate targets. In addition, PPAs can sometimes provide operating savings, whether via lower electrical rate or cash flow positive contract for differences settlement.

North America and Europe are regions we foresee the greatest potential for offsite PPA projects in the near term due to the regional regulatory environment and the scale of our energy consumption. Onsite solar opportunities are highly dependent on local regulations as well as site-specific energy rates with our focus in the near term on applicable regions of the United States, Europe, and Asia. As noted above, these projects can result in operational savings against potential utility costs on the order of a couple cents per kilowatt hour (kWh). The savings are specific to each on-site project and are not included in the potential financial impacts figures below.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

10000000

Explanation of financial impact figure

The potential financial impact figures are based on virtual power purchasing agreement (VPPA) market pricing in AIB Europe combined with the savings of not having to purchase an equivalent volume of unbundled energy attribute certificates (8 EUR per MWh). As VPPAs utilize a settlement for difference financial structure, settlement will vary based on market conditions and can be positive or negative for a single period. The range represents potential long-term annualized financial impact using the P10 and P90 models. The market for VPPAs continues to evolve around the world and can be impacted by raw material costs, market variations, and government regulations. The figures presented are based on current conditions and are subject to change.

Cost to realize opportunity

250000

Strategy to realize opportunity and explanation of cost calculation

To realize this opportunity, we will continue our efforts while working with leading advisors and developers to invest in new onsite and offsite wind and solar projects.

The estimated cost to realize is associated with advisor and legal fees (\$250,000) to support us with identifying and contracting with developers for VPPAs to cover our electricity consumption in AIB Europe.

We realized this strategy in the United States and signed two virtual power purchasing agreements in 2022, which will add over 900,000 megawatt hours (MWh) of clean electricity to the grid and cover 100% of our current US electricity needs by 2026.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

We are committed to an active and robust shareholder engagement program. We believe that understanding the perspectives of our shareholders is a key component of good corporate governance. The goals of our shareholder engagement program include:

- Providing visibility and transparency into our business, our financial and operational performance and our strategy;
- Determining which issues are important to our shareholders and sharing our views on those issues; and
- Discussing and seeking feedback on our business and our executive compensation and corporate governance policies and practices, and our sustainability initiatives.

In addition our stakeholder engagement program includes proactive outreach on a regular basis throughout the year to help us understand our stakeholders' evolving interests and expectations as we build strong relationships and mutual understanding of the issues most relevant to the Company's success. These interactions are invaluable and stakeholder input informs our CSR strategy, which is actively refreshed to identify opportunities to create value and minimize risk.

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

2022 Corporate Social Responsibility Report.pdf

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 6.0	Company-wide	<Not Applicable>	The intermediate scenario pathway "represents a world with unequal and unstable socio-economic development (SSP3) and high GHG emission levels, leading to an increase of global mean surface temperature of approximately 3°C to 4°C by the end of the 21st century" (source: WWF Water Risk Filter). This scenario was used by the Climonomics platform. This scenario was also utilized with the WWF Water Risk Filter Tool to understand from a qualitative perspective the climate-related risks associated with water (e.g., flooding, water scarcity) in 2030 and 2050.
Physical climate scenarios RCP 4.5	Company-wide	<Not Applicable>	The current trend scenario pathway "represents a world similar to current socio-economic development trends (SSP2) and intermediate GHG emission levels, leading to an increase of global mean surface temperature of between 2°C and 3°C by the end of the 21st century." This scenario was used by the Climonomics platform. This scenario was also utilized with the WWF Water Risk Filter Tool to understand from a qualitative perspective the climate-related risks associated with water (e.g., flooding, water scarcity) in 2030 and 2050.
Transition scenarios IEA NZE 2050	Company-wide	<Not Applicable>	<p>"The Net Zero Emissions by 2050 Scenario (NZE) is a normative IEA scenario that shows a narrow but achievable pathway for the global energy sector to achieve net zero CO2 emissions by 2050, with advanced economies reaching net zero emissions in advance of others. This scenario also meets key energy-related United Nations Sustainable Development Goals (SDGs 7 and 13), in particular by achieving universal energy access by 2030 and major improvements in air quality. It is consistent with limiting the global temperature rise to 1.5 °C with no or limited temperature overshoot (with a 50% probability), in line with reductions assessed in the IPCC in its Sixth Assessment Report."</p> <p>Source: https://www.iea.org/reports/world-energy-model/net-zero-emissions-by-2050-scenario-nze</p> <p>A qualitative evaluation against the policy assumptions with a IEA NZE scenario indicates strong alignment with our net-zero strategy, particularly our approach to transition away from fossil fuels, which will require continued investment. Examples of policy assumptions include:</p> <p>2025: No new sales of fossil fuel boilers. 2030: 60% of global car sales are electric vehicles. 2035: Overall net zero-emissions electricity in advanced economies. 2045: 50% of heating demand met by heat pumps.</p>
Physical climate scenarios RCP 2.6	Company-wide	<Not Applicable>	RCP2.6 is representative of a scenario that aims to keep global warming likely below 2°C above pre-industrial temperatures. The majority of models indicate that scenarios meeting forcing levels similar to RCP2.6 are characterized by substantial net negative emissions by 2100, on average around 2 GtCO2/yr. This scenario was used by the Climonomics platform.
Physical climate scenarios RCP 8.5	Company-wide	<Not Applicable>	RCP 8.5 refers to the concentration of carbon that delivers global warming at an average of 8.5 watts per square meter across the planet. The RCP 8.5 pathway delivers a temperature increase of about 4.3°C by 2100, relative to pre-industrial temperatures. This scenario was used by the Climonomics platform.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

We are early in the usage of climate-related scenario analysis. Our focal questions will center on:

- What possible future developments need to be probed?
- What variables are needed to support decision-making?
- What forces and developments have the greatest ability to shape future performance?

Results of the climate-related scenario analysis with respect to the focal questions

By utilizing the Climonomics platform and physical scenario analysis of the WWF Water Risk Filter Tool, we are able to better understand that acute and chronic risks such as water scarcity are a regionally specific variable to consider. This qualitative analysis can provide context to support future investment and facility siting. For existing facilities in these regions, it also supports the need for ongoing awareness of local policy and its impact from a financial and reputational perspective.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The risks and opportunities associated with climate have already influenced our product and packaging design strategies. Examples include the replacement of expanded polystyrene coolers for cold chain shipments with our award-winning 100% readily recyclable paper cooler and the conversion of our cold storage portfolio to low-impact refrigerants. As customer expectations around climate continue to evolve, we are evaluating the strategic expansion of our Design for Sustainability process across our business segments.
Supply chain and/or value chain	Yes	For Thermo Fisher, over 95% of our value chain emissions are generated outside of our operations. To address this, our Scope 3 emissions target, which has been validated by the Science Based Targets initiative (SBTi), is to have 90% of our suppliers by spend set climate-related, science-based targets by 2027. In 2022, we invited hundreds of our largest and most emissions-intense suppliers to participate in the CDP Supply Chain program to share information on their climate goals and progress. We also provided training and hosted meetings with key suppliers to help educate them and grow their understanding of their environmental impacts. As a result, we were able to expand our community of suppliers who have either set, or committed to set, science-based targets.
Investment in R&D	Yes	In 2022, we elevated our Design for Sustainability (DfS) approach, positioning our R&D organization to expand, accelerate and standardize how environmental considerations are embedded into product development. Our strategy is focused on five key impact areas: less hazardous, less waste, more energy efficient, responsibly packaged and extended life. As the Company's strategic center for the latest in greener innovation, our DfS program deploys critical training, tools and resources that continue to increase the rigor of our longstanding efforts in sustainable design.
Operations	Yes	Our 2030 commitment to reduce scope 1 + 2 emissions by more than 50% and our net-zero strategy to transition away from fossil fuels while accelerating the adoption of renewable electricity—a direct result of the risks and opportunities associated with climate change—has significantly influenced our operational strategy. In 2022, we launched our Net-zero Building Design Guide requiring all new construction to be aligned with our climate strategy.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Capital expenditures Capital allocation	Our net-zero by 2050 commitment reflects our approach to strategically manage climate-related risks and opportunities. The influence on our financial planning can be seen in the following ways: <ul style="list-style-type: none"> - We enhanced direct strategic investments in staffing, re-evaluating and resourcing our climate program to support the design and implementation of our net-zero roadmap. - We established carbon expectations for business units that will influence capital expenditures towards facility infrastructure, specifically away from fossil fuel equipment and towards equivalent electric-powered equipment. - Business units are directly evaluating environmental sustainability-specific opportunities to enhance their market opportunities, which may result in a change in allocation towards these climate-related initiatives. - Our risk management process identified short-term risks and impacts; acute physical risk due to increased severity and frequency of extreme weather events contributing to increased capital expenditures; and chronic physical risk due to changes in precipitation patterns and extreme variability in weather patterns contributing to increased insurance claims liability. Site-specific mitigation and financial plans are being developed to manage identified risks.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, but we plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2018

Base year Scope 1 emissions covered by target (metric tons CO2e)

321190

Base year Scope 2 emissions covered by target (metric tons CO2e)

486151

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

807341

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1:**Purchased goods and services (metric tons CO2e)**

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

50.4

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

400441.136

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

351834

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

254395

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

606229

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

49.4254281687349

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

This target, a 50.4% absolute reduction in Scope 1 and 2 greenhouse gas emissions by 2030 from a 2018 baseline covers 100% of relevant Thermo Fisher Scientific emission sources using operational control as a boundary. There are no exclusions.

Plan for achieving target, and progress made to the end of the reporting year

Our plan to achieve this target is outlined by our net-zero roadmap as presented in our 2022 Corporate Social Responsibility Report. We will transition away from fossil fuels in our buildings and fleet, transition to low-impact refrigerants, and accelerate the adoption of renewable electricity. In 2022, our emissions were more than 24% lower compared to our 2018 baseline. This progress positions us well ahead of our newly raised 2030 target. Year over year, we achieved a reduction of 8% by increasing our procurement of renewable electricity, reaching 36% of our total electricity usage, and flattening fossil fuel growth through energy conservation practices.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2022

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Engagement with suppliers	Percentage of suppliers (by procurement spend) with a science-based target
---------------------------	--

Target denominator (intensity targets only)

<Not Applicable>

Base year

2021

Figure or percentage in base year

6

Target year

2027

Figure or percentage in target year

90

Figure or percentage in reporting year

13

% of target achieved relative to base year [auto-calculated]

8.33333333333333

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, this is our validated science-based near-term target for Scope 3 emissions.

Is this target part of an overarching initiative?

Science Based targets initiative - other

Please explain target coverage and identify any exclusions

This target, 90% of suppliers, by spend, setting a science-based target by 2027 covers our purchasing of goods and services and transportation of those goods for the company. There are no exclusions.

Plan for achieving target, and progress made to the end of the reporting year

Our plan to achieve this target is outlined by our net-zero roadmap as presented in our 2022 Corporate Social Responsibility Report such that we will engage with suppliers to support them on their decarbonization journey. Over several years, we have engaged with our suppliers using EcoVadis and, in 2022, incorporated the CDP Supply Chain program.

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Target year for achieving net zero

2050

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Please explain target coverage and identify any exclusions

This target, net-zero emissions by 2050 covers 100% of Thermo Fisher Scientific's Scope 1, 2 and 3 emission sources using operational control as a boundary. There are no exclusions.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

As neutralization of any unabated emissions (if any) with permanent carbon removals would not occur until our target year of 2050, our focus is on our near-term efforts on absolute reductions to drive emissions by at least 90%.

Planned actions to mitigate emissions beyond your value chain (optional)

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	326	200000
To be implemented*	0	0
Implementation commenced*	14	6700
Implemented*	10	123000
Not to be implemented	131	2000

C4.3b

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

Initiative category & Initiative type

Company policy or behavioral change	Change in purchasing practices
-------------------------------------	--------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

5000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 4: Upstream transportation & distribution

Voluntary/Mandatory

Voluntary

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

1500000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

We worked with our transportation carriers to identify opportunities for carbon reduction in the shipment of our products. We have developed a project pipeline for reducing emissions by transitioning eligible air shipments in major lanes to less intensive distribution methods, such as ocean and ground-based transportation. Our first pilot in one of our largest air travel lanes successfully diverted 37% of the lane's shipment volume from air transport to ocean transport, resulting in an estimated reduction of 5,000 metric tons of carbon dioxide equivalents.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

1000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

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

300000

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

1130000

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

In 2022, the steam generation at our Linz, Austria site was optimized, reducing the use of fossil fuels. These energy efficiency measures made it possible to downsize the electrical equipment required to generate steam, enabling our transition to renewable heat in a more cost-effective manner. The impact of this optimization project also resulted in a reduction of approximately 1,000 MTCO2e annually. Savings and investment required are approximations.

Initiative category & Initiative type

Low-carbon energy consumption	Low-carbon electricity mix
-------------------------------	----------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

52000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

0

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

460000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

We purchased and retired 148,306 MWHs of Green-e certified renewable energy certificates (RECs) in the United States market. Our renewable electricity strategy is to shift from purchasing unbundled RECs to virtual power purchase agreements in 2023.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	An example is Europe's planned ban on fossil fuel vehicles in 2035.
Other (Business unit emission reduction targets)	We have established Scope 1 emission targets for each of our business units.
Employee engagement	More than 500 colleagues track and report onsite activity to measure progress against climate-related KPIs.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Green Bond Principles (ICMA)

Type of product(s) or service(s)

Heating and cooling	Other, please specify (Ultra-Low Temperature Freezers)
---------------------	--

Description of product(s) or service(s)

The United States Environmental Protection Agency and European Commission have identified that hydrofluorocarbons (HFCs) are powerful greenhouse gases with significant global warming potential. TDE Series ULT freezers use natural, non-hydrofluorocarbon (HFC) refrigerants, which help reduce environmental impact and further increase cooling efficiency. Additionally, the foam insulation in TDE Series freezers is water blown, which helps reduce the chemical emissions and outgassing that are common in other foam products.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (Reduction calculated by identifying lifetime refrigerant emissions of current refrigerant used in Freezers compared to previous refrigerants (R-134a).)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

Per Unit

Reference product/service or baseline scenario used

Ultra-Low Temperature Freezers

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

7331

Explain your calculation of avoided emissions, including any assumptions

Reduction is calculated by identifying lifetime refrigerant emissions of current refrigerant used in freezers compared to previous refrigerants (R-134a) based on Calculating HFC and PFC Emissions from the Manufacturing, Installation, Operation, and Disposal of Refrigerants & Air-conditioning Equipment (Version 1.0) prepared by the GHG Protocol.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.5

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

In December 2021, we closed our acquisition of PPD, Inc, a global contract research organization.

Details of structural change(s), including completion dates

Per GHG Protocol, financial reporting standards, and our Environmental Sustainability Data Collection and Reporting Procedure, this acquisition will be accounted for in this reporting period, calendar year 2022. Historical data back to our baseline has been restated to reflect this change.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	Improvements made to our methodology in 2022 include: - Updated economic environmental input-output factors from UK Department for Business, Energy & Industrial Strategy - Inclusion of primary supplier data for upstream/downstream transportation and distribution - Inclusion of country-level detail for use of sold products - Operational data collection improvements. 2018 to 2021 reporting years have been restated to reflect baseline adjustment related to the acquisition of PPD.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based Scope 2, market-based Scope 3	From our Environmental Sustainability Data Collection and Reporting Procedures: "There are certain scenarios in which the baseline data will require adjustment to ensure that comparisons are consistent. The baseline for any indicator shall be adjusted if any of the following scenarios occur and the occurrence results in a +/- 5% change from the baseline value of a given sustainability indicator at the global level: • Mergers, acquisitions, and divestments; • Insourcing or outsourcing of activities, if those activities were not included in the base year; • Changes in calculation methodologies or improvements in emission factors/activity data; or • Errors or omissions of data from the base year. Note: In the case of greenhouse gas emissions, Scope 3 emissions shall be considered separately from Scope 1 and 2 when determining whether a baseline adjustment is needed. The uses of the terms mergers, acquisition and divestments are defined by financial reporting requirements. If deemed significant (i.e., creating a +/- 5% change), the environmental and financial impacts of this activity shall be added or removed from the baseline and all subsequent years, using the methodology outlined by the GHG Protocol Corporate Standard. Reporting on an amended Company structure shall be consolidated no later than six (6) months following activity finalization, where feasible and not in conflict with requirements of the partnering business. For example, data associated with mergers, acquisitions and divestments occurring in January through June should be incorporated into that year's external report(s). In contrast, events occurring in July onward should be incorporated into the following year's external report(s). Organic growth or decline, including purchasing of individual buildings, shall not be considered in any baseline adjustment.	Yes

C5.2

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

Scope 1

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO2e)

321190

Comment

This number is a restatement from the 2021 CDP Climate Change disclosure (and all other previous disclosures). Significant updates include improvements to methodology and the inclusion of business acquisitions. These updates resulted in a notable increase to the base year emissions.

Scope 2 (location-based)

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO2e)

473215

Comment

This number is a restatement from the 2021 CDP Climate Change disclosure (and all other previous disclosures). Significant updates include improvements to methodology and the inclusion of business acquisitions. These updates resulted in a notable increase to the base year emissions.

Scope 2 (market-based)

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO2e)

486151

Comment

This number is a restatement from the 2021 CDP Climate Change disclosure (and all other previous disclosures). Significant updates include improvements to methodology and the inclusion of business acquisitions. These updates resulted in a notable increase to the base year emissions.

Scope 3 category 1: Purchased goods and services

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

8430136

Comment

The restated number uses more recent emissions factors from DEFRA/BEIS and an improved adjustment for currency conversion and PPI inflation. In addition, the mapping of the SIC codes has been improved and expanded to include a broader range of spend categories. We expect that the restated baseline number is more accurate than the previously disclosed baseline number.

Scope 3 category 2: Capital goods

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

395372

Comment

The restated number uses more recent emissions factors from DEFRA/BEIS and an improved adjustment for currency conversion and PPI inflation. In addition, the mapping of the SIC codes has been improved and expanded to include a broader range of spend categories. We expect that the restated baseline number is more accurate than the previously disclosed baseline number.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

157392

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

1361472

Comment

Scope 3 category 5: Waste generated in operations

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

93099

Comment

Scope 3 category 6: Business travel

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

52695

Comment

Scope 3 category 7: Employee commuting

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

418621

Comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

0

Comment

Thermo Fisher did not have any upstream leased assets during the 2021 calendar year that were not already calculated as part of Scope 1 and 2 using an operational boundary.

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

0

Comment

There is no restatement associated with our reported Scope 3 category 9 emissions. Figures presented in upstream transportation and distribution represent both upstream and downstream emissions. Spend-based analysis is unable to separate upstream and downstream transportation and distribution.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

1824340

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

58617

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

IEA CO2 Emissions from Fuel Combustion

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

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Center for Corporate Climate Leadership: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases

US EPA Emissions & Generation Resource Integrated Database (eGRID)

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)
351834

Start date
January 1 2022

End date
December 31 2022

Comment
This value was assured by Bureau Veritas.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
350244

Start date
January 1 2021

End date
December 31 2021

Comment
This value is a restatement resulting from improvements in data collection improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
326030

Start date
January 1 2020

End date
December 31 2020

Comment
This value is a restatement resulting from improvements in data collection improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
325158

Start date
January 1 2019

End date
December 31 2019

Comment
This value is a restatement resulting from improvements in data collection improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 4

Gross global Scope 1 emissions (metric tons CO2e)
321190

Start date
January 1 2018

End date
December 31 2018

Comment
This is our baseline year for our Scope 1 + 2 reduction target. This value is a restatement resulting from improvements in data collection improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

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 are reporting a Scope 2, market-based figure

Comment

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?**Reporting year****Scope 2, location-based**

416928

Scope 2, market-based (if applicable)

254395

Start date

January 1 2022

End date

December 31 2022

Comment

These values were assured by Bureau Veritas.

Past year 1**Scope 2, location-based**

443181

Scope 2, market-based (if applicable)

311121

Start date

January 1 2021

End date

December 31 2021

Comment

These values are a restatement resulting from improvements in data collection and methodology improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 2**Scope 2, location-based**

436939

Scope 2, market-based (if applicable)

373278

Start date

January 1 2020

End date

December 31 2020

Comment

These values are a restatement resulting from improvements in data collection and methodology improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 3**Scope 2, location-based**

452160

Scope 2, market-based (if applicable)

441927

Start date

January 1 2019

End date

December 31 2019

Comment

These values are a restatement resulting from improvements in data collection and methodology improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

Past year 4

Scope 2, location-based

473215

Scope 2, market-based (if applicable)

486151

Start date

January 1 2018

End date

December 31 2018

Comment

The market-based value is our baseline value for our Scope 1 + 2 reduction target. These values are a restatement resulting from improvements in data collection and methodology improvements that resulted in a change greater than 5%. Some updates include improvements to methodology and the inclusion of business acquisitions.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 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 gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

8332494

Emissions calculation methodology

Spend-based method

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

0

Please explain

We calculate emissions associated with purchased goods and services mapping our company spend to standard industrial classification codes that have corresponding 2019 UK BEIS spend-based emissions factors. 2019 is the last year UK BEIS updated these factors. We adjust the spend to account for inflation since 2019 and currency exchange rates. The reported emissions cover our business purchases and our distribution channel business (Fisher Scientific).

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

321795

Emissions calculation methodology

Spend-based method

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

0

Please explain

We calculate emissions from capital goods in the same manner as we do for purchased goods and services. See above for that methodology. Spend mapped to the standard industrial classification code "Machinery and equipment n.e.c." is classified as capital goods.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

142240

Emissions calculation methodology

Fuel-based method

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

97

Please explain

We calculate this category by applying UK BEIS well-to-tank emission factors for all purchased fossil fuels, electricity, steam and hot water across our facilities and vehicles. In 2022, approximately 3% of energy purchases are estimated using regional energy intensity factors.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1346259

Emissions calculation methodology

Distance-based method

Other, please specify (Weight-based model)

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

100

Please explain

We calculate transportation and distribution (T&D) emissions using transport mode, weight, and distance data. Shipment origins and destinations are reported at a country level granularity and for the United States, state-level granularity. Distance is estimated using the geographic center of each origin and destination or where the origin/destination is in the same country/state, an assumed city-to-city trip is used. UK BEIS emissions factors are applied including the use of radiative forcing and well-to-tank factors. The value provided covers upstream and downstream T&D (category 9).

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

82807

Emissions calculation methodology

Waste-type-specific method

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

100

Please explain

We calculate this category using actual waste disposal records from waste vendors outlining mass per material type and waste disposal stream. UK BEIS emission factors are applied to these waste streams.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

125280

Emissions calculation methodology

Average data method

Spend-based method

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

100

Please explain

We calculated this category based on primary data from our vendors associated with 1) air travel segmentation based on segment distance and cabin class 2) rail travel distance 3) rental vehicle days of use 4) number of hotel stays per country, and 5) estimated travel distance associated with our car allowance program. UK BEIS emission factors were applied including well-to-tank factors and radiating forcing for air travel.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

417373

Emissions calculation methodology

Average data method

Other, please specify (Homeworking emissions white paper from EcoAct)

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

100

Please explain

Our employee commuting emissions include both commuting and working from home due to a significant shift in work from home starting in 2020. We calculated employee commuting emissions based on country-specific breakdown of travel forms to estimate total distance per travel type and then applied UK BEIS emission factors including well-to-tank factors. For work from home emissions, we estimated the electricity usage for lighting and computer usage as well as electricity and gas usage for space heating and cooling with country-specific estimations of heating and cooling needs. US EPA eGrid and IEA electricity factors were then applied.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

0

Emissions calculation methodology

Site-specific method

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

100

Please explain

Thermo Fisher did not have any upstream leased assets during the 2022 calendar year that were not already calculated as part of Scope 1 and 2 using an operational boundary.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1

Emissions calculation methodology

Distance-based method

Other, please specify (Weight-based model)

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

0

Please explain

Our transportation and distribution (T&D) data cannot flag whether a transit trip is upstream or downstream. As a majority of our T&D is upstream, the entirety of our calculated upstream and downstream T&D emissions is disclosed in our upstream T&D emissions above.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

This category is not relevant as the products we sell represent the end of their processing chains as a final product for customer use (examples being Freezers and pipette tips).

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1741229

Emissions calculation methodology

Methodology for direct use phase emissions, please specify (Lifetime electricity consumption and refrigerant leakage for all relevant products sold)

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

100

Please explain

For calculation of use of sold products emissions, we identified products that consumed electricity or contained refrigerants. None of our products consume fossil fuels. For products consuming electricity, we identified the number units sold during the reporting period and determined estimates for consumption per day, number of days the unit is used annually useful life in years. Together, these provide the estimated total lifetime electrical usage of our products. An average of global residual electricity emission factors was applied to the total electricity value as we conservatively assumed no renewable electricity usage by our customers. For products containing refrigerants, we identified the number of units sold in the reporting period, refrigerant capacity of the unit, type of refrigerant, and estimated lifespan. An average fugitive emission rate of 5.5% per year, based on IPCC Good Practices Guidelines for Stand-Alone Commercial Applications, was utilized in combination with IPCC refrigerant specific emission factors to calculate total greenhouse gas emissions.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

59174

Emissions calculation methodology

Other, please specify (Methodology based on estimated disposal of sold products)

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

0

Please explain

Emissions associated with end-of-life treatment of our sold products is difficult to determine as we do not have data associated with the final disposal by our customers. To calculate this emission category, we developed an estimation methodology for the total weight of products sold during the reporting and assumed an equal distribution between waste to energy incineration, landfill, and recycling. UK BEIS waste disposal emission factors were used.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Thermo Fisher does not have any downstream leased assets nor plans to have downstream leased assets in the future that would fall outside of our operational boundary.

Franchises

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Thermo Fisher does not operate using a franchise model.

Investments

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Thermo Fisher does not operate as a financial institution (e.g., private equity, bank, etc).

Other (upstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Please explain

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1 2021

End date

December 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)

8430136

Scope 3: Capital goods (metric tons CO2e)

395372

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

157392

Scope 3: Upstream transportation and distribution (metric tons CO2e)

1361472

Scope 3: Waste generated in operations (metric tons CO2e)

93099

Scope 3: Business travel (metric tons CO2e)

52695

Scope 3: Employee commuting (metric tons CO2e)

418621

Scope 3: Upstream leased assets (metric tons CO2e)

0

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

1824340

Scope 3: End of life treatment of sold products (metric tons CO2e)

58617

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

2021 is the baseline year for the Scope 3 target. Data presented here reflects updates in methodology including updated UK BEIS economic environmental factors, inclusion of primary supplier data for upstream/downstream transportation and distribution, and inclusion of country-level detail for use of sold products.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic 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

13.5

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

606229

Metric denominator

unit total revenue

Metric denominator: Unit total

4491500000

Scope 2 figure used

Market-based

% change from previous year

3.4

Direction of change

Decreased

Reason(s) for change

Change in renewable energy consumption

Please explain

Our purchasing of renewable electricity increased significantly in 2022, from 28% of global electricity to 36%, resulting in a decrease in absolute emissions while our revenue increased.

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	321159	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	431	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	770	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	17545	IPCC Fifth Assessment Report (AR5 – 100 year)
PFCs	13	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	5292	IPCC Fifth Assessment Report (AR5 – 100 year)
NF3	0	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
Argentina	15
Australia	168
Austria	9311
Belgium	2610
Brazil	1393
Canada	12365
Chile	12
China	3021
Colombia	2
Costa Rica	68
Croatia	9
Czechia	647
Denmark	904
Finland	667
France	6584
Germany	7860
Hungary	1166
India	1444
Indonesia	0
Ireland	19366
Israel	29
Italy	38975
Japan	862
Lithuania	3796
Luxembourg	1
Malaysia	28
Mexico	1419
Netherlands	3672
New Zealand	895
Norway	277
Poland	1530
Portugal	802
Russian Federation	394
Singapore	1365
Slovakia	84
South Africa	668
Republic of Korea	774
Spain	2076
Sweden	832
Switzerland	1650
Taiwan, China	26
Thailand	10
United Arab Emirates	15
United Kingdom of Great Britain and Northern Ireland	26575
United States of America	181585
United States Minor Outlying Islands	13078
Viet Nam	1
Bulgaria	41
Ukraine	1
Turkey	478
Saudi Arabia	1
Romania	173
Greece	745
Latvia	3
Serbia	13
Pakistan	0.1
Peru	5
Philippines	1

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	6523
Corporate Offices and Fleet	58133
Laboratory Products and Biopharma Services	214212
Life Sciences Solutions	54447
Specialty Diagnostics	18519

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Argentina	272	272
Australia	3618	3618
Austria	9936	9936
Belgium	1841	1610
Brazil	135	135
Canada	4590	4460
Chile	47	45
China	24960	252
Colombia	4	4
Costa Rica	1	1
Croatia	17	46
Czechia	6580	448
Denmark	913	5418
Finland	1114	3526
France	755	662
Germany	8110	806
Hungary	83	112
India	5312	808
Indonesia	2	2
Ireland	10331	1946
Israel	163	163
Italy	11469	745
Japan	2370	2370
Lithuania	4004	8733
Luxembourg	1	1
Malaysia	362	362
Mexico	14082	14135
Netherlands	7172	2882
New Zealand	731	731
Norway	200	2226
Poland	520	758
Portugal	46	71
Russian Federation	970	970
Singapore	9954	9954
Slovakia	51	40
South Africa	3614	1564
Republic of Korea	2348	2348
Spain	275	541
Sweden	880	1536
Switzerland	831	214
Taiwan, China	374	374
Thailand	64	64
United Arab Emirates	107	107
United Kingdom of Great Britain and Northern Ireland	12824	1688
United States of America	257633	172315
United States Minor Outlying Islands	5238	0
Viet Nam	5	5
Bulgaria	124	133
Greece	52	61
Latvia	4	6
Pakistan	0.2	0.2
Peru	5	5
Philippines	502	4
Serbia	110	110
Romania	17	17
Saudi Arabia	4	4
Turkey	13	13
Ukraine	219	219

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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Analytical Instruments		9503
Specialty Diagnostics		7012
Laboratory Products and Biopharma Services		173397
Life Sciences Solutions		59867
Corporate Offices		4118

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

No

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 in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	56125	Decreased	8	We increased our renewable electricity from 28% to 36% of total global electricity usage, resulting in a reduction of approximately 56,125 MTCO2e. [56,125 MTCO2e / 661,365 MTCO2e (2021 Scope 1 + 2) = 8.0%]
Other emissions reduction activities	2100	Decreased	0.3	Reductions from projects in 2022 totalled 2,100 MTCO2e. [2,100 MTCO2e / 661,365 MTCO2e (2021 Scope 1 + 2) = 0.3%]
Divestment	0	No change	0	No significant divestments occurred during the reporting period
Acquisitions	0	No change	0	The PPD, Inc acquisition was completed in December 2021. Scope 1 + 2 has been restated for 2018 through 2021 to account for PPD, therefore no change when compared to restated values.
Mergers	0	No change	0	No mergers occurred during the reporting period
Change in output	3089	Increased	0	We experienced growth in output to meet the needs of the healthcare industry in 2022, resulting in minor increases in electricity and natural gas consumption. [3,089 MTCO2e / 661,365 MTCO2e (2021 Scope 1 + 2) = 0.005%]
Change in methodology	0	No change	0	2021 values were restated to use the same methodology as in 2022. See restated 2021 values in Section C5.
Change in boundary	0	No change	0	2021 values were restated to use the same boundary in 2022. See restated 2021 values in Section C5.
Change in physical operating conditions	0	No change	0	No significant changes in physical operating conditions occurred in 2022.
Unidentified	0	No change	0	No other significant changes occurred in 2022 as compared to 2021.
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 undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	1529019	1529019
Consumption of purchased or acquired electricity	<Not Applicable>	436759	809420	1246179
Consumption of purchased or acquired heat	<Not Applicable>	0	20169	20169
Consumption of purchased or acquired steam	<Not Applicable>	0	35314	35314
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	9545	<Not Applicable>	9545
Total energy consumption	<Not Applicable>	446304	2393922	2840226

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 heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

No sustainable biomass is recorded as being used by our operations.

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

No biomass is recorded as being used by our operations.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

No hydrogen is recorded as being used by our operations.

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

No coal is recorded as being used by our operations.

Oil**Heating value**

HHV

Total fuel MWh consumed by the organization

10780

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

10780

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Includes breakdown of fuel oil used by our operations.

Gas**Heating value**

HHV

Total fuel MWh consumed by the organization

1155993

MWh fuel consumed for self-generation of electricity

967

MWh fuel consumed for self-generation of heat

580333

MWh fuel consumed for self-generation of steam

526332

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

48361

Comment

Breakdown of enterprise natural gas usage per use is estimated based general site operational characteristics

Other non-renewable fuels (e.g. non-renewable hydrogen)**Heating value**

HHV

Total fuel MWh consumed by the organization

362246

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

10650

MWh fuel consumed for self-generation of steam

351596

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Includes propane, diesel, liquified propane gas, and other crude oil and petroleum products.

Total fuel**Heating value**

HHV

Total fuel MWh consumed by the organization

1529019

MWh fuel consumed for self-generation of electricity

967

MWh fuel consumed for self-generation of heat

601763

MWh fuel consumed for self-generation of steam

877928

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

48361

Comment**C8.2d****(C8.2d) 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	12924	9545	12924	9545
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.****Country/area of low-carbon energy consumption**

China

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

40000

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

China

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment**Country/area of low-carbon energy consumption**

South Africa

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2208

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

South Africa

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

India

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

6500

Tracking instrument used

I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

India

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unkown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

148306

Tracking instrument used

US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Austria

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

30264

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Austria

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Czechia

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

13682

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Please select

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Germany

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

24037

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Please select

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

43762

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Please select

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Netherlands

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

13154

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Please select

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

61880

Tracking instrument used

REGO

Country/area of origin (generation) of the low-carbon energy or energy attribute

United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (unknown mix)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

8019

Tracking instrument used

US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Germany

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1562

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Italy

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Italy

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

1940

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Italy

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Lithuania

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

12682

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Please select

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

Netherlands

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

5460

Tracking instrument used

GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Italy

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or re-powering)

<Not Applicable>

Comment

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

United States of America

Consumption of purchased electricity (MWh)

719330

Consumption of self-generated electricity (MWh)

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

17204

Consumption of self-generated heat, steam, and cooling (MWh)

Total non-fuel energy consumption (MWh) [Auto-calculated]

<Calculated field>

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

66655

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

66655

Country/area

Mexico

Consumption of purchased electricity (MWh)

35364

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

35364

Country/area

China

Consumption of purchased electricity (MWh)

40161

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

706

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

40867

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	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 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Thermo Fisher final Assurance Statement 2022.pdf

Page/ section reference

All pages of the attached INDEPENDENT LIMITED ASSURANCE STATEMENT from Bureau Veritas

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Thermo Fisher final Assurance Statement 2022.pdf

Page/ section reference

All pages of the attached INDEPENDENT LIMITED ASSURANCE STATEMENT from Bureau Veritas

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Thermo Fisher final Assurance Statement 2022.pdf

Page/ section reference

All pages of the attached INDEPENDENT LIMITED ASSURANCE STATEMENT from Bureau Veritas

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services

Scope 3: Capital goods

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Scope 3: Upstream transportation and distribution

Scope 3: Waste generated in operations

Scope 3: Business travel

Scope 3: Employee commuting

Scope 3: Use of sold products

Scope 3: End-of-life treatment of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Thermo Fisher final Assurance Statement 2022.pdf

Page/section reference

All pages of the attached INDEPENDENT LIMITED ASSURANCE STATEMENT from Bureau Veritas

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISAE3000	Limited assurance was conducted for all forms of energy consumption. Thermo Fisher final Assurance Statement 2022.pdf
C8. Energy	Renewable energy products	ISAE3000	Limited assurance was conducted for all renewable electricity purchases and onsite generation. Thermo Fisher final Assurance Statement 2022.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)?

Yes

C11.1a

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

Other carbon tax, please specify (Our UK facilities are subject to the UK Climate Change Levy related to the consumption of electricity and natural gas.)

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Other carbon tax, please specify

Period start date

January 1 2022

Period end date

December 31 2022

% of total Scope 1 emissions covered by tax

96

Total cost of tax paid

690000

Comment

Our UK facilities are subject to the UK Climate Change Levy related to the consumption of natural gas. Excludes Scope 1 emissions associated with fugitive refrigerant emissions. Total cost of tax paid is an approximation.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Our net-zero emission roadmap establishes our intent to transition away from fossil fuels in our facilities and vehicles across the globe while accelerating the adoption of new wind and solar generation facilities on- and off-site. This approach will mitigate the negative impact of carbon pricing systems on our business and, depending on the specific regulations, may provide a favorable opportunity for our Company. While the exact timing for when such regulation might be adopted is unknown, we are closely monitoring the momentum in European countries.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

Yes

(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.**Project type**

Other, please specify (Wood building elements)

Type of mitigation activity

Carbon removal

Project description**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

1019

Purpose of cancellation

Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2022

Were these credits issued to or purchased by your organization?

Purchased

Credits issued by which carbon-crediting program

Not issued by a program

Method(s) the program uses to assess additionality for this project

<Not Applicable>

Approach(es) by which the selected program requires this project to address reversal risk

<Not Applicable>

Potential sources of leakage the selected program requires this project to have assessed

<Not Applicable>

Provide details of other issues the selected program requires projects to address

<Not Applicable>

Comment

Project type

Biochar

Type of mitigation activity

Carbon removal

Project description**Credits canceled by your organization from this project in the reporting year (metric tons CO2e)**

90

Purpose of cancellation

Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2021

Were these credits issued to or purchased by your organization?

Purchased

Credits issued by which carbon-crediting program

Not issued by a program

Method(s) the program uses to assess additionality for this project

<Not Applicable>

Approach(es) by which the selected program requires this project to address reversal risk

<Not Applicable>

Potential sources of leakage the selected program requires this project to have assessed

<Not Applicable>

Provide details of other issues the selected program requires projects to address

<Not Applicable>

Comment

Project type

Bioenergy with carbon capture and storage (BECCS)

Type of mitigation activity

Carbon removal

Project description

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

40

Purpose of cancellation

Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2021

Were these credits issued to or purchased by your organization?

Purchased

Credits issued by which carbon-crediting program

Not issued by a program

Method(s) the program uses to assess additionality for this project

<Not Applicable>

Approach(es) by which the selected program requires this project to address reversal risk

<Not Applicable>

Potential sources of leakage the selected program requires this project to have assessed

<Not Applicable>

Provide details of other issues the selected program requires projects to address

<Not Applicable>

Comment

C11.3

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

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price

Shadow price

How the price is determined

Price with material impact on business decisions

Objective(s) for implementing this internal carbon price

Drive low-carbon investment

Scope(s) covered

Scope 1

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Evolutionary

Indicate how you expect the price to change over time

As low-carbon technology and approaches mature, we anticipate the implicit price and necessity for the internal carbon price to reduce over time.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)

0

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)

0

Business decision-making processes this internal carbon price is applied to

Capital expenditure

Operations

Mandatory enforcement of this internal carbon price within these business decision-making processes

Yes, for all decision-making processes

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

Our net-zero strategy is to transition away from fossil fuels. To execute on this strategy, we established two mechanisms to transition away from the installation of new fossil fuel-consuming equipment:

1. Our capital request process was updated to incorporate our net-zero strategy into the capital investment assessment by determining the greenhouse gas impact of a project. Any project that adds and/or extends fossil fuel consumption will require a Fossil Fuel Exception Plan to be approved by business and corporate leaders. The Plan needs to consider accelerated equipment phase out, more rapid depreciation, and funding for others project to offset the resulting emissions.
2. A Net-Zero Building Design Guide requiring all new buildings to be operated with the use of fossil fuels.

These mechanisms serve to place a theoretical infinite shadow price on carbon with an exception process focusing on technological and infrastructure limitations rather than cost.

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

C12.1a

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

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

31

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

In 2022, Thermo Fisher participated in the CDP Supplier Engagement program to focus engagement with suppliers that represent the largest share of our Scope 3 emissions. Approximately 350 suppliers, representing the top 60% of purchased good and services emissions were asked to disclose climate information on the CDP platform with a particular emphasis on whether the supplier has or is committed to setting a science-based target.

Additionally, we continued our engagement with suppliers on a broad range of ESG topics, including climate, using the EcoVadis assessment platform.

Impact of engagement, including measures of success

Asking suppliers about their ability to measure, disclose, set targets against, and ultimately reduce carbon emissions promotes sustainability literacy and maturity towards our aim of aligning our procurement spend with suppliers who have set science-based targets. In 2022, we provided training and hosted meetings with key suppliers to help educate and grow their understanding of their environmental impacts. As a result, we were able to expand our community of suppliers who have either set, or committed to set, science-based targets. Suppliers with science-based targets rose to 13%, while suppliers committed to set a science-based climate target rose to 10%. We will continue to track our suppliers' progress in setting science-based targets as a measure of success in the decarbonization of our supply chain and progress towards our supplier engagement target (90% by 2027). The data gathered through these efforts provide our procurement teams with valuable information for sourcing decision-making. Year-over-year, we continue to see additional suppliers improve their performance.

Our 2022 engagements also demonstrated that using buyer-supplier relationships to encourage transparency and disclosure builds supplier capacity. As an example, through our CDP Supply Chain activity, we influenced more than 60 companies to disclose on the platform for the first time, and of these companies 41 complied as a direct result of Thermo Fisher's request exclusively.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

1

% total procurement spend (direct and indirect)

1

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

In 2022, we expanded our training offerings to suppliers through participation in the CDP Supply Chain program. This engagement also included specific training for suppliers via joint Thermo Fisher and CDP webinars and supplier access to CDP tools and trainings. Additionally, in key categories of goods that have significant impact on our Scope 3 emissions such as plastics and chemicals, procurement is partnering with R&D teams and suppliers to discuss opportunities for the exploration of lower carbon materials and solutions.

Impact of engagement, including measures of success

Educating suppliers via training and corrective action requests continues to lead to improved supplier performance. Within the CDP Supply Chain program this is measurable, as 22 individual suppliers participating in the program received a higher CDP score year over year, demonstrating an increase in climate management maturity.

Similarly, for the more than 625 individual suppliers in the Thermo Fisher network that underwent an EcoVadis reassessment in 2022, the average score improvement in the Environmental theme increased from 57.7 to 61.6, signaling improved practice and increased capability.

Comment

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing	Run an engagement campaign to education customers about your climate change performance and strategy
-------------------------------	--

% of customers by number

1

% of customer - related Scope 3 emissions as reported in C6.5

33

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

Climate is becoming an increasingly important consideration for our customers. To keep customers informed on how Thermo Fisher Scientific can support them in achieving their climate targets, we have prioritized two segments of customers for focused engagement: (i) customers actively looking to understand the environmental impact of the goods and services they purchased from Thermo Fisher Scientific and (ii) our largest customers by revenue. For these customers, we provide an overall view of our environmental sustainability program, our net-zero strategy and recent progress as well as their shared emissions allocation, which they can utilize for their Scope 3 category 1 reporting.

We proactively engage with customers on environmental sustainability issues to understand their expectations and how we can best meet them. Understanding that each customer has a unique set of needs and success measures (i.e., higher renewable electricity, emission reduction target, maturity model), our objective is to develop a holistic and flexible program that enables our company and businesses to progress against these various metrics in partnership with our customers.

Impact of engagement, including measures of success

The feedback from our customers has been positive. They are appreciative of our level of engagement and participation in workshops, supplier days, surveys, and reporting platforms. This is demonstrated by an article written by our customer, Boehringer Ingelheim, on our engagement (<https://www.boehringer-ingelheim.com/about-us/sustainable-development/more-green/more-green-reducing-emissions-throughout-supply-chain>)

We measure success by how customers classify our climate performance strategy against their maturity scale. Examples include individual customer scales, where we are often classified as "Leading", and the Sustainable Markets Initiative Health Systems Task Force joint supplier standards, where we meet or exceed most of the standards and are evaluating the remaining with respect to our environmental sustainability strategy.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Climate-related disclosure through a public platform

Description of this climate related requirement

Towards our target of having 80% of direct materials spend (~40% of all procurement spend) assessed by EcoVadis by 2025, in 2022 we closed the year at 50% (~26% of all procurement spend). This assessment process allows us to communicate our expectations regarding environmental management and assess a supplier's ability to meet that expectation.

% suppliers by procurement spend that have to comply with this climate-related requirement

10

% suppliers by procurement spend in compliance with this climate-related requirement

26

Mechanisms for monitoring compliance with this climate-related requirement

Off-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, and we do not plan to have one in the next two years

Attach commitment or position statement(s)

<Not Applicable>

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Business Roundtable

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Representing the chief executive officers of America's leading companies, which combined have more than 15 million employees and generate more than \$7.5 trillion in annual revenues, Business Roundtable believes corporations should lead by example, support sound public policies and drive the innovation needed to address climate change. To this end, the United States should adopt a more comprehensive, coordinated and market-based approach to reduce emissions. This approach must be pursued in a manner that ensures environmental effectiveness while fostering innovation, maintaining U.S. competitiveness, maximizing compliance flexibility, and minimizing costs to business and society.

International cooperation and diplomacy backed by a broadly supported U.S. policy will be the key to achieving the collective global action required to meet the scope of the challenge and position the U.S. economy for long-term success. The consequences of climate change for global prosperity and socioeconomic well-being are significant; the world simply cannot afford the costs of inaction.

<https://www.businessroundtable.org/climate#:~:text=Business%20Roundtable%20believes%20that%20to,consistent%20with%20the%20Paris%20Agreement>.

There are no significant differences between our positions.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

National Association of Manufacturers

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

NAM has compiled its recommendations in a paper called "The Promise Ahead.

The big idea: Climate change is a global problem that requires a global solution, which is why it's critical for the United States to work in tandem with other countries. And while all nations need to be involved in promoting climate action, there should also be room for the kind of science-led innovation that American manufacturers have already demonstrated and will continue to provide.

- As it says in the paper, "Manufacturing holds the key to solving this global challenge. Think about the technologies that will get us there. Clean energy. Carbon capture. Batteries. Microgrids. Efficiency. Advanced vehicles. Manufacturers make these products and technologies and will continue to invent new ones."

A push for global action: The plan recommends negotiating and ratifying a binding international climate action treaty that is both fair and enforceable, a position the NAM has long held. This will ensure that the United States does not suffer a competitive disadvantage and can lead the way in developing job-creating technologies and products.

<https://www.nam.org/nam-reinforces-climate-priorities-11743/?stream=policy-legal>

There are no significant differences between our positions.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

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

2022 Corporate Social Responsibility Report.pdf

Page/Section reference

Environmental Section on pages 47 to 57

Environmental Data on pages 64 to 66

TCFD Index on pages 81 to 82

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

This is our 2022 Corporate Social Responsibility Report.

Publication

In other regulatory filings

Status

Complete

Attach the document

2023 Proxy Statement.pdf

Page/Section reference

Climate section included on page 34

Content elements

Strategy

Emission targets

Comment

This is our 2023 Proxy Filing.

Publication

In mainstream reports

Status

Complete

Attach the document

2022 Annual Report.pdf

Page/Section reference

Climate discussed on page 4

Content elements

Strategy

Risks & opportunities

Emission targets

Comment

This is our 2022 Annual Report.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Business Ambition for 1.5C UN Global Compact Other, please specify (BioPhorum and Pistoia Alliance's Clinical Trial Environmental Impact Community)	Thermo Fisher became a signatory to the Business Ambition for 1.5C in 2021 and fulfilled its obligation when SBTi validated our near-term and net-zero target in 2023. Since 2019, Thermo Fisher has been a signatory to the UN Global Compact, which supports companies in their alignment with the Ten Principles on human rights, labor, environment and anti-corruption. BioPhorum, a membership organization that facilitates global industry collaboration to accelerate sustainability progress within the biopharmaceutical and device sectors; in 2022, we actively contributed to the development and publication of BioPhorum's Environmental Sustainability Roadmap. Pistoia Alliance's Clinical Trial Environmental Impact Community, an organization focused on quantifying the greenhouse gas impact of decentralized clinical trials and identifying key levers to reduce those impacts; Thermo Fisher is proud to serve on the steering committee.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, and we do not plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	No, and we do not plan to undertake any biodiversity-related actions	<Not Applicable>

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	Please select

C15.7

(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
-------------	------------------	---

C16. 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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Senior Vice President Global Business Services	Other C-Suite Officer

SC. Supply chain module

SC0.0