Momentive Performance Materials - Climate Change 2022

C0. Introduction

C0.1

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

Momentive Performance Materials group (Momentive) is one of the world's largest producers of silicones and silicone derivatives. With more than 80+ years of experience in research, development, and production of silicone materials, Momentive has a historical legacy of commercial first-ever silicone processes and products. Our vast product portfolio is comprised of many advanced silicone solutions, allowing us to serve several industries including automotive, aerospace, electronics, personal care, consumer products, building and construction, as well as specialized industries such as specialty fluids, silanes, and additives.

Headquartered in Waterford, New York, United States, Momentive is an indirect wholly-owned subsidiary of MOM Holding Company. On January 1, 2020, the quartz and specialty ceramics portion of our business was divested; this reporting period includes the silicones and silicone derivatives portfolio which is organized into three businesses: Performance Additives, Formulated Specialties, and Core Silicones & Intermediates. The company has 40+ locations in 20+ countries and more than 5000 employees. In 2021, the total revenue globally from our products and services was $2.68 B.

Momentive is technology and innovation focused, with 3,400 patents serving high-growth applications. We collaborate with our customers to enable solutions that help solve their sustainability challenges, improve their operational efficiency or reduce greenhouse gas (GHG) emissions of end products, such as advanced materials that enable automotive e-mobility and fuel-efficiency, construction sealants and coatings that enable energy efficient buildings, and agricultural additives that enable more efficient food production.

As is typical in our industry, we consume resources in the form of raw materials, energy, and other feedstocks. These ingredients are mixed and reacted together, along with energy utilizing our proprietary processes and specialized equipment to produce intermediaries and finished products. Intermediate products may then be further processed or sold. Finished products are packaged and shipped to our customers around the world, where they are usually added as an ingredient into their products and/or formulations.

We use energy and raw materials responsibly, and our management system drives decisions based on these resources. Energy is a key component to the production of our products. When we mix feedstocks and ingredients to create our products, energy must either be added (by heating the ingredients) or removed (by cooling them). As an integral part of our manufacturing process, the energy we use is what produces most of our GHG emissions. Momentive actively manages our energy source selection and usage. This effort benefits both the business and the environment. The business impact from selecting a more cost-effective energy source, and only using what is required can be substantial, and less energy consumed translates to less environmental impact. We aim to limit energy consumption while improving energy efficiency. About two-thirds of the energy we consume is directly generated at our plants through combustion of natural gas to create steam, along with relatively small quantities of diesel, gasoline, and propane. The remaining one-third is consumed in the form of electricity generated by others. Direct and indirect GHG emissions are key points of focus for Momentive.

Momentive strives to become a stronger and more successful global silicone and specialties company by creating Solutions for a Sustainable World and is committed to do our part to address climate change. In 2020, Momentive established 2025 Sustainability Goals that include innovating products that solve customers' sustainability challenges, and reducing our impact through operational excellence at both our sites and throughout our supply chain, with the following climate- and environment-related goals:

· Reduce greenhouse gas emissions, energy consumption, and solid waste and hazardous waste generation by 25% versus a 2019 baseline by 2025.

· Increase renewable electricity supply to 50% by 2025.

· Reduce net water consumption by 10% versus a 2019 baseline by 2025.

· Achieve platinum EcoVadis supply chain sustainability score and CDP Climate Change A- score by 2025.

· Drive innovation so that 75% of our new product sales deliver sustainability improvements to our customers or society by 2025.

In 2020, Momentive became a signatory of the UN Global Compact (UNGC). In 2021, we published our first communication on our progress (COP) in our activities and management systems in support of the UNGC principles.

Please note that while the information and data herein are being provided to the best of the company's knowledge, Momentive makes no express or implied warranties regarding the accuracy of this information and data. Momentive reserves the right to amend or update the information and data.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

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

Brazil
China
Germany
India
Italy
Japan
Republic of Korea
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-CH0.7

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

Row 1

Bulk organic chemicals

Polymers

Bulk inorganic chemicals

Other chemicals

Specialty chemicals

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
No	<Not Applicable>

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Board-level committee	Momentive's Board of Directors provides high level strategic direction and oversees the continued development and improvement of Momentive's Environmental, Social and Corporate Governance (ESG) performance. The Operations Committee of the Board of Directors reviews Momentive's ESG performance on a quarterly basis. The Compensation, Nominating & Governance Committee of the Board of Directors discusses and approves the incorporation of sustainability performance into our incentive structure.
Chief Executive Officer (CEO)	Our CEO is a member of the Board of Directors and has responsibility for climate-related issues. The CEO reviews energy, GHG, waste, water and renewable energy strategy, goals and performance for the entire company. The CEO has overall responsibility for execution of the annual operating plan that is approved by the Board of Directors, including capital expenditures for climate related functions and projects. For example, the CEO champions our 5-year company-wide strategic plan, which includes climate protection goals (energy, GHG, water and waste reduction goals; goals to increase the portion of renewable energy). These goals are for the period 2020-2025. In 2021, the CEO also championed for a dedicated capital budget for projects that contributes significantly to our 2025 Sustainability goals even when these projects do not meet the threshold for financial returns.
Other C-Suite Officer	Our Senior Vice President (SVP), Environmental, Health and Safety (EHS) & Operations Excellence, who reports to the CEO, is the liaison to the Operations Committee of the Board of Directors and reports to the Operations Committee on climate related issues, as well as other environmental, health, safety, quality and continuous improvement issues. This SVP enables climate related performance by leading the EHS, Quality, Continuous Improvement, Product Stewardship, Sustainability and Global Engineering functions and ensuring an overarching approach to Sustainability across manufacturing in the three businesses through leadership of the Operations Council. This SVP ensures that the capital investment process includes climate protection criteria and that capital budgets are set and protected. This SVP sponsors a cross-functional Sustainability Steering Committee and employs dedicated Corporate Sustainability staff. The Corporate Sustainability Team coordinates Momentive's sustainability programs and initiatives, provides periodic reports to the Executive Leadership Team and the Committee, and develops external reports, including the annual sustainability report, with the support of a cross-functional Project Management Office. For example, in 2021, this SVP championed the 2020-2021 Sustainability Report prepared by Momentive, which was aligned with GRI reporting guidelines. The report required collaboration from across the company, and featured disclosures on GHG emissions and climate protection. This SVP also championed the publication of our 1st Communication on Progress (COP) for our commitment towards 10 principles of UN Global Compact.
President	Our business Presidents & General Managers (Performance Additives, Formulated Specialties, and Core Silicones & Intermediates) are responsible for delegating, managing and reporting on GHG performance, renewable energy, and steps being taken to reduce carbon emissions across their respective businesses, including manufacturing and technology. They work in concert with the activities and priorities set by the SVP, EHS & Operations Excellence and support the integration of sustainability thinking and continuous improvement within their respective businesses. They are responsible for business and site level budgeting for sustainability and climate related spending. They ensure that projects and initiatives to achieve reduction goals (such as carbon reduction goals) are included in budgets. For example, the businesses are focusing on products that reduce our emissions of greenhouse gases through greater efficiency, as well as increased use of renewable energy at our sites. At the beginning of 2022, we have three sites with 100% renewable energy, and our largest site is currently using ~30% renewable energy.

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 – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Momentive's Operations Committee of the Board of Directors and Executive Leadership Team (ELT) review Momentive's ESG performance on a quarterly basis. The Operations Committee provides high level direction and oversees the continued development and improvement of Momentive's ESG performance, including progress against goals for addressing climate related issues, recommends the general budget for EHS & Sustainability capital spending, and oversees initiatives to improve operational efficiencies in manufacturing and integrated supply chain. Momentive's Compensation, Nominating & Governance Committee of the Board of Directors provides high level direction and oversees the design and implementation of the compensation policies, strategies, plans and programs for our key employees, including incentives tied to sustainability performance. Climate related issues are reviewed by the CEO and ELT monthly where energy, GHG, waste and water KPIs are presented by the SVP, EHS & Operations Excellence. Needed interventions at the business level are managed by the President & General Managers and briefed up to the ELT. Total company performance in energy, GHG, waste and water KPIs are managed by the entire ELT under the CEO's leadership, with regular meetings where Sustainability topics are addressed. The ELT discusses and sets goals for energy consumption, GHG emissions and renewable energy to reduce overall GHG emissions from energy use.

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	The Board members in the Operating committee overseeing environmental and climate related issues should be able to perform the following duties: * Oversee the climate / environmental related compliance programs and initiatives * Monitor our climate / environmental related performance statistics * Recommend the general budget for climate / environmental related capital spending * Oversee climate / environmental related audit programs	<Not Applicable>	<Not Applicable>

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other C-Suite Officer, please specify (Sr. Vice President, EHS & Operations Excellence)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other C-Suite Officer, please specify (Executive Leadership Team)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The CEO reports directly to the Board of Directors and is the top level of the organization management. The SVP, EHS & Operations Excellence, where Sustainability reports, is a direct report to the CEO. The Business Presidents & General Managers are also direct reports to the CEO. Each has responsibility for the manufacturing operations relating to his / her business and, accordingly, a role in addressing climate change issues and performance associated with the business. Functional leaders, such as Supply Chain and Technology, also report to the CEO and have responsibility for their organization's role in achieving the company's sustainability goals. The CEO's direct reports form the Executive Leadership Team (ELT). The ELT meets at least monthly to discuss key issues and management of the company, and to review company performance, including performance relating to sustainability.

The CEO sets direction - mission and vision - for the company. His or her vision and foresight in seeing the importance of climate change to our company's performance, to our customers success, and to our employees well-being is where our sustainability program starts. The CEO sets direction on GHGs/energy/water/waste performance and is accountable for achieving company's sustainability goals. The CEO, with input from the ELT, provides the ultimate integration of sustainability (and climate performance) into everything we do at Momentive, including financial performance. The CEO and ELT are actively engaged in Sustainability issues and review plans, statements, strategies, goals and performance in detail. The CEO is a passionate spokesman for sustainability initiatives internal and external to Momentive.

The SVP, EHS & Operations Excellence provides for and facilitates the cross-functional interactions and collective action needed to succeed in reducing carbon, energy, water consumption, and waste across the business. This SVP ensures goal alignment and an overarching approach to Sustainability across manufacturing in the three businesses through leadership of the Operations Council. By providing forums where climate issues can be discussed and integrated into actual operations, the CEO's message can be heard, understood and acted upon. Best practices can be identified and elevated for wider adoption, and representatives of many different functions, sites and levels are exposed through these forums. For example, this SVP leads Momentive's EHS (and Sustainability) Learning & Improvement Review, a monthly company-wide best practice sharing forum attended by the CEO and ELT, all manufacturing sites, and many other workers.

The three business Presidents & General Managers, in turn, take the CEO message and the sustainability performance objectives created and discussed at the CEO level and translate that into goals for action deeper into the organization. These Presidents also provide the first line of performance reporting and management interventions as metrics and KPIs flow up from the site level, before being reported to the CEO. Budgets are reviewed and approved to weave execution of climate/sustainability objectives with other business activities.

Reporting to the CEO, Business Presidents & General Managers, SVP EHS & Operations Excellence, and other members of the ELT are the respective VPs and Sr. Directors who take the vision from above and implement it. Data, reporting and performance likewise are rolled up through this level where it is aggregated for upward reporting to the ELT.

Safety & Sustainability is a Core Value for Momentive and is integrated throughout our management systems and governance structures. Momentive makes specific efforts to weave sustainability thinking, management, reporting, budgeting and behaviors into our day-to-day business processes to ensure long-term integration into how we conduct business. Reporting on climate change is included in our monthly Safety & Sustainability metrics reporting to the same management structure described above to ensure visibility to and accountability of our most senior leaders and executives. In this way, Momentive attempts to make sustainability part of the company's DNA.

Sustainability performance monitoring starts at the site level, where cost and consumption data are captured for Sustainability KPIs - energy consumption (primary and secondary), waste generation (solid and hazardous waste), water consumption and discharge, and greenhouse gas emissions (Scope 1, Scope 2 and some Scope 3). Data are entered into a dedicated corporate sustainability data management system. The system rolls up the data from the site level to the business level, and to the corporate level. At each level, data are analyzed, trends identified, and measures implemented to reduce negative trends, or advance positive trends. The data management system allows Momentive to assess costs, absolute and relative performance, and assess environmental impact.

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	In 2020 we incorporated sustainability performance into our incentive structure starting 2021 plan year. Please see details below.

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	Type of incentive	Activity incentivized	Comment
All employees	Monetary reward	Behavior change related indicator Supply chain engagement Company performance against a climate-related sustainability index	Safety & Sustainability comprised 10% of Momentive's 2021 annual incentive plan for employees worldwide in an incentive-eligible position to ensure that we are rewarding actions central to Momentive's long term viability and growth. An industry-trusted standard (EcoVadis) was chosen due to its importance to our customers and includes the management of climate-related issues for Momentive and our supply chain.
All employees	Non-monetary reward	Behavior change related indicator Company performance against a climate-related sustainability index	IN late 2021, (to be implemented in 2022), We have a established company wide recognition program ("Inspire" program) with monetary and non-monetary rewards as well as a specific Safety & Sustainability award program. All employees and project teams are eligible for consideration. Some sites recognize a "Sustainability Employee of the Month" and reward them with a parking space, lunch and a celebration.
All employees	Non-monetary reward	Emissions reduction project Energy reduction target Efficiency project Efficiency target Behavior change related indicator Environmental criteria included in purchases Supply chain engagement Company performance against a climate-related sustainability index	Starting from 2021, we have extended the companywide prestigious award called "Inspiration Awards" to include a new Sustainability category. The criteria for this award states "Individual or Team proactively engages in Sustainability improvement in the area of People (through cultural impact), Products (through profitable growth) and Planet (through excellence in operations & Supply Chain) and that contributes to Momentive's 2025 Sustainability Goals". The winner is awarded a recognition certificate and a trophy.

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	1	From current time to 1 year is considered short term.
Medium-term	1	5	From 1 to 5 years is considered medium term.
Long-term	5	25	Long term is further out than 5 years.

C2.1b

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

In determining the potential impact of any candidate event or impact, we evaluate the following for both positive and negative outcomes, the magnitude of potential impact, likelihood of occurrence, and controls in place:

- How much of our business will be affected?

Momentive has large, medium and small customers around the world. In deciding how much of our business will be potentially impacted by an event, we consider the size of the customer and the types and quantities of products that they purchase order to evaluate how much of the total business will be affected.

- How big will the impact be on our businesses?

Momentive has large, medium and small sites around the world. In deciding potential impact, the size of the site and the locations potentially impacted are considered in order to evaluate how much of the total business will be affected.

- How important is the impacted organization to the rest of the business

In considering potential impact to an organization, scale of the impact as well as importance to the overall enterprise of the impacted organization is assessed. Assigning and quantifying tangible and intangible values can assist in determining how important an event may be to the individual organization but also beyond that to the whole enterprise.

- Potential for stakeholder or customer concern or reaction or reputational harm

Momentive has an active "Customer Love" program and approach that attempts to assess stakeholder and customers concerns in advance of an event, map out potential response or concern scenarios, and plan for potential concerns or reactions.

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
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
Annually

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Using a multi-disciplinary, cross functional risk assessment team, sites, facilities and operations are periodically assessed for exposure to all the "normal" potential losses, along with "acute" losses driven by climate related events, such as flooding, excessive storm strength, and "chronic" events like sea level change, and changing temperatures. Potential events are catalogued (scenario planning). Most likely impacts and worst-case scenarios evaluated against site resilience, ability to respond, and community and regional preparedness. Potential damage to assets, harm to employees and impairment of business are evaluated; risk to brand and reputation are assessed. Climate, environmental and water risk is assessed. Appropriate response plans and capabilities are set up as to be able to respond best to a "most likely" event while developing cross-region responses to more "worst case" events.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
Annually

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process

Potential suppliers are assessed prior to being granted work, including for EHS and sustainability risks. Supplier quality, EHS and legal compliance, conformance to Momentive supplier code of conduct (updated in 2019 and includes environmental protection and sustainability guidance for suppliers) and financial health (among other factors) are assessed once a supplier has been identified as a candidate supplier but before any work is contracted to the supplier. This gives assurance that a supplier will be able to perform during the life span of the underlying Momentive product, potentially a long term (decades) need. Our supplier code of conduct has also been incorporated into our standard purchase order terms and conditions starting in 2020. Active suppliers are periodically assessed during run-of-contract for risks to our supply chain, including EHS and sustainability. Loss protection and security of supply are assessed, where feasible, and the supply chain is diversified to reduce risk and provide multiple pathways to secure our production. We have developed and are deploying a supplier ESG assessment questionnaire that will assess more details around sustainability related topics, including climate related risks. Active suppliers who do not materially comply with our supplier standards, supplier code of conduct requirements, and applicable worker health and safety performance requirements, or do not comply with applicable environmental, health, safety and human rights laws will be given notice and may be terminated if conditions are not corrected. For example, a sample of current suppliers is assessed in depth each year, and any corrective actions identified are tracked for correction. On site contractors are considered part of the EHS risk management program at the site at which they are working. Contractors must adhere to health and safety requirements that are applicable to analogous activities conducted by employees and receive communications and training regarding risks and hazards at our sites, and are expected to conserve resources and care for the environment, as described in the supplier code of conduct. The behaviors of contractors that pose an unacceptable risk to human health, safety, or the environment are not tolerated, and incidents on Momentive grounds are treated as Momentive incidents, with full investigations, root cause analysis and corrective measure implementation.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Product Stewardship addresses risk in the product use life cycle phase. Working within each business segment, product stewardship teams lead cross-functional Risk Reviews, including product stewards, toxicologists, sustainability leader, business leaders, technology leaders, product managers, and customer support, meet to comprehensively review regulatory, health, environmental and sustainability risks and opportunities within each product family. At the product level, going product by product, compliance requirements (such are REACH), toxicological data, hazardous materials transport, customs and import risk, brand risk, reputation risk and a host of other risks are cataloged discussed and prioritized for analysis and, where appropriate, action. For example, some of our customers are requesting ISO 16128 Natural Index calculations for our products. Additionally, more of our customers are asking Momentive to complete a customer specific carbon assessment where each product we provide with a calculated carbon emission factor by product (kg carbon per kg product). In 2021, we responded to several customer's request to provide this information by performing limited Life Cycle Assessments on a case to case basis.

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	Current regulations are considered so that our operations and activities are in compliance with applicable legal requirements. Momentive has internal resources and external consultants to identify and comply with legal requirements, and also participates in industry associations to ensure the company is aware of, and complies with, applicable legal requirements and also understands the potential climate-related impacts of such requirements. An example is understanding the refrigerants used in our chillers to adhere to hydrofluorocarbon (HFC) regulations.
Emerging regulation	Relevant, always included	Emerging regulations that are predicted to have impact on our facilities, operations and/or products are considered. Momentive has a Global Director, Government & Industry Relations who leads a global internal network consisting of regional leaders and product stewardship & regulatory affairs resources to stay abreast of developing regulations, and to work with regulatory bodies and industry groups to monitor and inform future regulations. An example for Momentive is emerging regulations in Europe on cyclics in cosmetics and other consumer and professional uses. Momentive assesses the business risk of such regulatory changes to understand the potential impact not only on our customers and product sales but also on our operations. Momentive also participates in silicones industry assessments to understand the carbon balance related to silicones over their life cycle, including GHG benefits resulting from the use of silicone products in addition to the GHG emissions related to production, use and end-of-life, to inform how silicones contribute to the circular economy and inform future policies.
Technology	Relevant, sometimes included	Technology that will impact our facilities and/or products is considered. These include risks associated with moving to a lower carbon, energy-efficient system, or technologies that improves our ability to meet customer needs, or to meet their needs in a more efficient manner. An example for Momentive is the use of bio-based raw materials in our products. Bio- based materials may have quite different GHG emissions from the incumbent materials what they replace, and they may require different technology may be required to incorporate them such materials into our products and processes. Additionally, a significant opportunity exists for Momentive to provide new-to-the-market formulations and products that will leverage other technologies to reduce climate impacts. Electrification of transportation and solar energy are both areas where our improved heat sink compounds allow greater power density and electrical efficiency.
Legal	Relevant, sometimes included	As a global company, we monitor legal risks in all relevant world areas. Legal issues that are climate related and could impact our products or facilities are included.
Market	Relevant, always included	Climate related shifts in supply/demand are assessed as we look to put long term contracts in place. Decisions are made based upon previous history with customers and suppliers and any climate related problems they have had in the past. As an example, many of our customers have stated supply chain goals for GHG emissions that will affect our emissions in order to continue to do business with those customers.
Reputation	Relevant, always included	Risks to our company reputation (climate related or not) are assessed. Stakeholder and community perception is very important to us. Momentive sites around the world organize community days and Family Safety Days where employees, their families and the local community is invited. An example for Momentive is in our sustainability report, where we report on our ESG performance in a source that is accessible to communities around our plants and employment candidates who wish to work for a responsible company with a good reputation.
Acute physical	Relevant, always included	We have had facilities impacted by acute event driven risks such as hurricanes and floods. These types of risks are evaluated for each facility and mitigation is put in place to minimize the impact. An example is our Waterford, NY (USA) site, which has increased flood risks due to increased frequency of very high rainstorm events that are strengthened by climate change related factors, and the mitigation plans in place for the site. Another example of acute risk relates to our supply chain. The climate change is generating more and more extreme weather events (recent freezing in South of US or Hurricanes/Tornados/Heavy Rains, etc.) that can become disruptive for the entire Supply Chain.
Chronic physical	Relevant, sometimes included	Long term shifts in climate patterns are included when trying to plan longer term. Using our Waterford site as an example again (it is our largest plant and location of our corporate headquarters), we consider whether our site could begin to experience flooding due to sea level rise. Such factors are considered as part of our facility risk assessment and mitigation plans.

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

Emerging regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Emerging regulations on cyclics could force higher levels of purity, requiring more energy and investment in equipment.

Time horizon
Medium-term

Likelihood
Likely

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)
0

Explanation of financial impact figure
Estimated impact to invest in process improvements and additional energy burn to achieve regulatory requirements.

Cost of response to risk
0

Description of response and explanation of cost calculation
Existing production systems must be evaluated for ability to produce product in compliance with regulatory standards, and changes engineered.

Comment
We are currently working on risk mitigation and estimating better financial impact numbers.

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Momentive evaluates on a site level the impact for property damage due to physical weather events. Recommendations from our insurance carrier on how to reduce/mitigate the impact are developed into projects. Extreme weather conditions can cause our plants to be temporarily shut down due to damage, or from disruptions from raw material supply. Impacts to production have the potential to impact our ability to supply customers.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

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)
100000000

Explanation of financial impact figure
Financial impact is an estimate of the cost of asset damage, business interruption and the cost of finding alternative supplier and supply chains

Cost of response to risk
63000000

Description of response and explanation of cost calculation
Existing sites are assessed for climate related storm damage, and feasible projects are budgeted for and implemented. These estimates are based on our insurance premium and deductibles.

Comment
We are currently working on risk mitigation and estimating better financial impact numbers.

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Momentive evaluates on a site level the impact for property damage due to physical weather events. An adverse event at one of our sites due to a weather event could have negative impact on the surrounding community which could result in negative publicity and /or loss of sales. Property damage can cause loss of production capacity.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-high

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)
25000000

Potential financial impact figure – maximum (currency)
100000000

Explanation of financial impact figure
Financial impact is an estimate of the cost of lost business.

Cost of response to risk
63000000

Description of response and explanation of cost calculation
Adaption and mitigation projects are developed and a "dashboard" is used to keep our Executive Leadership Team updated on the status of each one. A formal review of all projects occurs every 6 months. The financial estimates are based on insurance premium and deductibles.

Comment
We are currently working on risk mitigation and estimating better financial impact numbers.

Identifier

Risk 4

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

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
The climate change is generating more and more extreme weather events (recent freezing in South of US or Hurricanes/Tornados/Heavy Rains, etc.) that can become disruptive for the entire Supply Chain.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

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)
25000000

Potential financial impact figure – maximum (currency)
100000000

Explanation of financial impact figure
Based on Enterprise Risk Management (ERM) assessment ranking and corresponding financial impact, mainly due to increased cost. We have undertaken commercial actions (e.g. alternate sourcing) to minimize this impact.

Cost of response to risk
0

Description of response and explanation of cost calculation
The cost to response is a modest balance sheet impact where we have targeted inventory builds to cover short term disruptions/enable supply chain alternate options to be effective.

Comment
In the last few years, we have undertaken several commercial actions to mitigate financial impact of this risk.

C2.4

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

C2.4a

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

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
We collaborate with customers to develop new, and upgrade existing, products to provide offerings that enable customers to reduce their carbon and other GHG footprint. Our new products can reduce customer processing steps, enable lower temperature processing, or enable more energy efficient designs.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

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)
171000000

Potential financial impact figure – maximum (currency)
229000000

Explanation of financial impact figure
New to market product introductions during years 2022-2026

Cost to realize opportunity
26000000

Strategy to realize opportunity and explanation of cost calculation
R&D scientists collaborate with customers to develop new products providing desired properties. Green Chemistry principles and program sustainability assessments based on WBSD guidelines are used to guide new product development. The cost calculation is based on the number of programs planned and the anticipated total R&D spend for the next five years.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
Products that have specific climate related attributes are being developed. Such products will allow us to enter new markets. We currently make waterproof silicone sealants and roof coatings; developing such products allow us to enable solutions for buildings that are less susceptible to climate related hazards while simultaneously opening new markets.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

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)
1000000

Potential financial impact figure – maximum (currency)
100000000

Explanation of financial impact figure
This is an estimate of the initial revenue from developing new products in a new market. Actual numbers would need to be determined.

Cost to realize opportunity
1000000

Strategy to realize opportunity and explanation of cost calculation
Collaboration with customers in the building industry to develop and test new products.

Comment
The additional cost is due to benchmarking and potential capital investment.

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Other, please specify (Setting 2025 Sustainability goals that focuses on reducing our resource consumption)

Primary potential financial impact
Reduced direct costs

Company-specific description
We have set 2025 Sustainability Goals that calls for reducing our energy consumption, GHG emission and waste generation by 25% and water consumption by 10%

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

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)
5000000

Potential financial impact figure – maximum (currency)
25000000

Explanation of financial impact figure
Estimates of cost savings from increased efficiency and reduced waste.

Cost to realize opportunity
2500000

Strategy to realize opportunity and explanation of cost calculation
Momentive has set company wide, strategic goals for reducing GHG emissions, energy, water and waste. Incorporating these goals will drive efficiency and productivity improvements that will have a positive benefit to the business and reduce our environmental footprint.

Comment

Identifier
Opp4

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Shift in consumer preferences

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
Customer demand is shifting toward greener and more natural products in some markets. As customer demand changes, we will need to develop products that meet our customers' needs. As consumers and employees become more environmentally aware, and regulations grow, the demands from our customers to formulate products that have no or less volatile organic compounds (VOCs) is increasing.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

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)
140000000

Potential financial impact figure – maximum (currency)
187000000

Explanation of financial impact figure
New to market product introductions during years 2022-2026

Cost to realize opportunity
18000000

Strategy to realize opportunity and explanation of cost calculation
R&D scientists collaborate with customers to develop new products providing desired properties. Green Chemistry principles and program sustainability assessments based on WBSD guidelines are used to guide new product development. The cost calculation is based on the number of programs planned and the anticipated total R&D spend for the next five years.

Comment

C3. Business Strategy

C3.1

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

Row 1

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

Publicly available transition plan
Yes

Mechanism by which feedback is collected from shareholders on your transition plan
Not applicable as our organization does not have shareholders

Description of feedback mechanism
<Not Applicable>

Frequency of feedback collection
<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)
2020-2021 Sustainability Report (page 15, 20, 24)

Explain why your organization does not have a 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: Bespoke physical scenario	Company-wide	1.5ºC	We used Science Based Target tool to verify that our 2025 GHG emission reduction goal is aligned with the recommendation of SBTi (not verified by SBTi). We used "Absolute Contraction Method", with a Base year of 2019 and Target year of 2025.

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

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

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	Both risks and opportunities related to growing business and consumer demand for innovative products and technologies that can facilitate better performance and decreased emissions of carbon have changed how we approach our product portfolio. Generally, our silicones drive better performance when they are incorporated into our customers products. Our silicones help to reduce use-phase energy consumption (such as by reducing the rolling resistance of tires) or by facilitating better use of energy (by enabling electric cars, cell phones, etc) or improving performance (improved wetting for an agricultural chemical). Our overall product strategy is shifting to include a specific portion (with goals) of our product portfolio to be more sustainable over time. The time frame for these changes is 1-10 years. We see many opportunities related to the growing demand from customers for increasing the natural content and sustainability focus from our high performance products. This has influenced our strategy in 3 ways; we focus on delivering new products for opportunities linked to sustainability (Electric Cars, Low VOC Solutions, Energy Efficient Buildings); we optimize our processes to reduce impact while providing the same performance and benefit to society; and use Green Chemistry principles and naturally derived approaches to increase “green content” of our products. This portion of our strategy is currently under way, with a time frame of 1-4 years. Tire silanes are a great example. We are developing silanes that will incorporate increased amounts of a naturally derived ingredient, may allow our customers an increased capability to incorporate natural rubber into their tires, and may help further reduce the amount of fuel consumed by rolling resistance over the life time of the tire. The tire is also expected to last longer. The time frame for this project is 0-5 years. Momentive is committed to producing products that not only meet customer needs but also help solve societal challenges and deliver environmental benefits.
Supply chain and/or value chain	Yes	Our supply chain is international in scope with many risks and opportunities embedded. In assessing climate risks and opportunities in our supply chain, we've taken a look at extraction and refining our silicon metal (our basic ingredient), transport distances and modes, and packaging materials. Risk and opportunities assessments are affecting where we procure silicon metal from (biodiversity impacts, extraction impacts, transport distances) and how it's refined (hydro power vs. fossil energy). Once we create a product, it must be packaged and transported to our customers, which is another area for risk and opportunities assessments. Our overall supply chain strategy is changing as a result. Our Logistics function is transitioning from truck to rail transportation where feasible, and the packaging we use is increasingly recycled. The time frame for these changes is 0-3 years. One example is from the risks and opportunities identified in packaging. Some of our customers have set targets for recycled or reusable packaging, which gives us the opportunity to partner with them. Instead of new containers (drums or totes), we are shifting to recycled or recycled content containers, and closing the packaging loop by pooling our containers with companies that have presence at both ends of the logistics chain, meaning that we procure containers from the same company that our customer will return them to, avoiding waste and reducing climate risks. The time frame for this project is now, with further deployments to other customers in the next 1-3 years. In another case, transport leg carbon emissions were reduced by 50% as a direct result of risk and opportunities assessment, and strategic adjustments to how we transport materials from Italy to Belgium. This effort will expand in the time frame 2020-2025.
Investment in R&D	Yes	Climate-related risks and opportunities have begun to influence our R&D investment strategy by driving greater emphasis on new products with specific green and sustainable properties. Many of our existing products amplify and leverage carbon reductions in our customers products, and our investment in R&D is turning to emphasize the green portion of our own product portfolio. Our strategy includes greater emphasis on Green Chemistry, creating new-to-market materials that meet unmet market needs for energy efficiency, materials reduction, and carbon elimination. We're also investing in existing process improvements to lower our own impact while providing improved products to our customers. For example, our strategy includes training 100% of our technologists in Green Chemistry principles in the time frame 2020-2021, and modifying our new product development cycle to measure green innovation in the timeframe 2020-2022. As mentioned above, the tire silane example is also applicable here from an R&D perspective. The new silane will contain natural ingredients, will help our customers increase the use of natural components, and may lower life-cycle/use phase energy consumption.
Operations	Yes	Risk and opportunity assessments are driving strategic decisions in company production operations. Costs to emit carbon and other wastes cannot be ignored, and energy is a significant expense that is certain to rise. Operations has begun placing greater emphasis on operational efficiency with attention paid to energy, waste, water and GHG emission. Momentive has set Sustainability goals for each of these areas that will run in the time frame 2020-2025. For example, at our Waterford site, our energy procurement strategy is shifting to accommodate a greater percentage of renewable energy. The renewable energy portion of our portfolio has grown to 28%, and 62% of energy consumed is low-carbon or non-fossil fuel. Our goal is to increase the company-wide percentage of renewable energy to 50% in the time frame 2020-2025.

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	Capital expenditures	As a result of assessing our climate related risks and opportunities, the way we plan for capital expenditures is changing. Energy use, GHG emission, water, waste and other sustainability related KPIs are being incorporated to internalize and more accurately account for environmental costs that may previously been externalized. We plan to embed sustainability, including carbon protection considerations, into our capital investment process as part of our 2020-2025 strategy. For example, while climate related opportunities and risks were considered previously using qualitative measures, we have begun estimating the costs of inputs and outputs that previously were not reflected in our capital planning. With costs included, capital expenditures decisions can factor in the total cost of operations with respect to environmental and climate impacts. For instance, a candidate Combined Heat and Power (CHP) installation had been considered as having too low a return on investment (ROI) to proceed, until brand, reputation and cost risks from climate related issued were costed and included; the CHP is now more attractive to the company and is being constructed as a result. There are several CH&P plants under consideration in the time frame 2020-2025. Financial planning in our R&D organization has also been impacted due to climate change. We have a stated goal of 75% of new product sales deliver sustainability improvements by 2025. To that effect, we have made significant investment in our development efforts to bring more sustainable products into the market.

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s transition to a 1.5°C world?

No, but we plan to in the next two years

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

Year target was set
2020

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Base year
2019

Base year Scope 1 emissions covered by target (metric tons CO2e)
244827

Base year Scope 2 emissions covered by target (metric tons CO2e)
170328

Base year 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)
415156

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 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
2025

Targeted reduction from base year (%)
25

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
311367

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
237448

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
166749

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)
404197

% of target achieved relative to base year [auto-calculated]
10.5589224291592

Target status in reporting year
Underway

Is this a science-based target?
Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next two years

Target ambition
1.5°C aligned

Please explain target coverage and identify any exclusions
Momentive has set formal GHG emission reduction goals for the period 2020-2025 for the entire company using operational control approach. Momentive has also set goals for renewable energy in our electricity mix for the entire company. Using the excel based tool published by Science Based Target initiative, we confirmed that our GHG emission reduction target is aligned with recommendations provided by the tool for Scope 1 and Scope 2 emissions. In the next two years, we will undertake a formal assessment of our GHG emission target for alignment with 1.5 deg C scenario. NOTE: We have recently updated our emission factors for various fuels. Previously, we calculate our Scope 1 and 2 GHG emissions using emission factors from “US Dept of Energy website, Voluntary Reporting of Greenhouse Gases, Appendix E of the instructions to Form EIA-1605, 2013”. Unfortunately this reference is no more available publicly. We are now using emission factors published by International Energy Agency (IEA). This has resulted in minor updates to our base year GHG emissions reported in previous editions of CDP Climate Change.

Plan for achieving target, and progress made to the end of the reporting year
We have taken specific actions to achieve our 2025 GHG emission reduction goal. These include: * In 2021, all Momentive manufacturing sites have developed a "Site Sustainability Plan" to achieve our corporate sustainability goals. These are specific projects with timeline that each site will execute till 2025 to achieve our short term and long term GHG emission reduction targets. * One of the most impactful strategic steps we undertook was to establish a plan for streamlining our operational footprint. Beginning in 2021 and continuing into 2022, we exited high energy consuming basics chemical operations in North America and transitioned to focus on sustainable, advanced silicone technologies, investing in industries such as Electronics, Healthcare, Tire and Beauty & Personal Care. This transition from high energy intensive operations to a focus on new, efficient growth assets that are both energy efficient and provide sustainable solutions in applications such as E-mobility, advanced healthcare solutions, and energy efficient buildings will be a key part of our sustainability journey. * Other initiatives to reduce our energy footprint in 2021 include installing a cogeneration facility at our Ohta, Japan site, transitioning to LED lighting at a number of sites, and several process-related energy efficiency improvement projects throughout our manufacturing plants.

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?
Target(s) to increase low-carbon energy consumption or production
Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2020

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2019

Consumption or production of selected energy carrier in base year (MWh)
58558

% share of low-carbon or renewable energy in base year
17

Target year
2025

% share of low-carbon or renewable energy in target year
50

% share of low-carbon or renewable energy in reporting year
18

% of target achieved relative to base year [auto-calculated]
3.03030303030303

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes. Momentive is targeting GHG reductions of 25% by 2025. Increasing renewable energy in our electricity mix will be one way of reducing our overall GHG emissions to achieve our target.

Is this target part of an overarching initiative?
Other, please specify (Target in alignment with SBTi, but not verified by SBTi)

Please explain target coverage and identify any exclusions
Momentive is targeting renewable and low-carbon energy goals for the period 2020-2025. Target covers all electricity consumed at our plants. We have not yet signed up to RE100 or Science Based Target initiative (SBTi) but are considering it. We have validated our goals against those calculated using SBTi excel based tool, we believe that our GHG target is aligned with SBTi's 1.5 deg C Scenario.

Plan for achieving target, and progress made to the end of the reporting year
We have developed a comprehensive plan to procure renewable electricity up to at least 50% using a combination of Power Purchase Agreement and Renewable Energy Credits. In addition, we have reduced electricity consumption in one of our large site without reducing amount of absolute amount of renewable electricity, thereby increasing the percentage of renewable electricity.

List the actions which contributed most to achieving this target
<Not Applicable>

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
2020

Target coverage
Company-wide

Target type: absolute or intensity
Absolute

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

Energy consumption or efficiency	Other, please specify (PetaJoule)

Target denominator (intensity targets only)
<Not Applicable>

Base year
2019

Figure or percentage in base year
6

Target year
2025

Figure or percentage in target year
4.5

Figure or percentage in reporting year
5.6

% of target achieved relative to base year [auto-calculated]
26.6666666666667

Target status in reporting year
Underway

Is this target part of an emissions target?
Our 2025 goal is to reduce our absolute GHG emission by 25%. Reducing our absolute energy consumption, in addition to procuring renewable sources of energy, is one way for us to achieve our GHG emission reduction goal.

Is this target part of an overarching initiative?
Other, please specify (We want to reduce our GHG emission by 25% by 2025 compared to our baseline year 2019.)

Please explain target coverage and identify any exclusions
This target covers the entire company.

Plan for achieving target, and progress made to the end of the reporting year
We have taken specific actions to achieve our 2025 energy reduction goal. These include: * In 2021, all Momentive manufacturing sites have developed a "Site Sustainability Plan" to achieve our corporate sustainability goals. These are specific projects with timeline that each site will execute till 2025 to achieve our short term and long term GHG emission reduction targets. * One of the most impactful strategic steps we undertook was to establish a plan for streamlining our operational footprint. Beginning in 2021 and continuing into 2022, we exited high energy consuming basics chemical operations in North America and transitioned to focus on sustainable, advanced silicone technologies, investing in industries such as Electronics, Healthcare, Tire and Beauty & Personal Care. This transition from high energy intensive operations to a focus on new, efficient growth assets that are both energy efficient and provide sustainable solutions in applications such as E-mobility, advanced healthcare solutions, and energy efficient buildings will be a key part of our sustainability journey. * Other initiatives to reduce our energy footprint in 2021 include installing a cogeneration facility at our Ohta, Japan site, transitioning to LED lighting at a number of sites, and several process-related energy efficiency improvement projects throughout our manufacturing plants.

List the actions which contributed most to achieving this target
<Not Applicable>

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		
To be implemented*	17	23152
Implementation commenced*	45	3480
Implemented*	2	19000
Not to be implemented		

C4.3b

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

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Part of our annual capital investment budget is dedicated to projects driven by mandatory regulations or standards.
Dedicated budget for energy efficiency	Our annual capital investment budget includes funds for energy efficiency projects.
Employee engagement	We have a Sustainability Project Management Office (PMO) and also a "volunteer" sustainability team. The PMO drives the reporting and processes and is led by a full-time Sustainability Leader and consists of part-time members across numerous functions and businesses. The "volunteer" team is open to anyone in the company that has an idea on how to reduce emissions. Both teams meet monthly and projects are reviewed.
Internal incentives/recognition programs	Momentive has a recognition program called "Inspire" where employees are recognized by peers, managers or others at various monetary and non-monetary levels for their work. Sustainability projects have been recognized as part of this program.
Compliance with regulatory requirements/standards	ISO 50000 - Energy Management Systems - are being implemented at several sites around the company.

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
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)
Please select

Description of product(s) or service(s)

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

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

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, other structural change, please specify (Exited high energy consuming basics chemical operations in North America and transitioned to focus on sustainable, advanced silicone technologies, investing in industries such as Electronics, Healthcare, Tire and Beauty & Personal Care.)

Name of organization(s) acquired, divested from, or merged with
None

Details of structural change(s), including completion dates
Shutting down basic chemicals operations, initiated in min-2021, continuing through 2022.

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	We have recently updated our emission factors for various fuels. Previously, we calculate our Scope 1 and 2 GHG emissions using emission factors from “US Dept of Energy website, Voluntary Reporting of Greenhouse Gases, Appendix E of the instructions to Form EIA-1605, 2013”. Unfortunately this reference is no more available publicly. We are now using emission factors published by International Energy Agency (IEA). This has resulted in minor updates to our base year GHG emissions reported in previous editions of CDP Climate Change.

C5.1c

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

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	We have recently updated our emission factors for various fuels. Previously, we calculate our Scope 1 and 2 GHG emissions using emission factors from "US Dept of Energy website, Voluntary Reporting of Greenhouse Gases, Appendix E of the instructions to Form EIA-1605, 2013". Unfortunately this reference is no more available publicly. We are now using emission factors published by International Energy Agency (IEA). This has resulted in minor updates to our base year GHG emissions reported in previous editions of CDP Climate Change.

C5.2

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

Scope 1

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
244827

Comment
Our base year emissions are from 2019 and we have been recording this data each year after the base year.

Scope 2 (location-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
170328

Comment
Our base year emissions are from 2019 and we have been recording more data each year after.

Scope 2 (market-based)

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
0

Comment
We have not calculated market based emissions for the baseline year.

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
1405

Comment
GHG Protocol, Technical Guidance for Calculating Scope 3 Emissions, Category 6, Business Travel Commuting: Distance based method Scope 3 emissions were calculated by summing CO2eq from our employees' hotel and airline usage.

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

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
The Climate Registry: General Reporting Protocol
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Center for Corporate Climate Leadership: Indirect Emissions From Events and Conferences

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)

237448

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Scope 1 emissions for 2021. This emission is the results of the use of various fuel sources in assets within our operational control.

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

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

Comment
We have initiated this workstream with an intention to publish our Market based emission from next year.

C6.3

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

Reporting year

Scope 2, location-based
166749

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Scope 2 emissions for 2021. Our scope 2 emission is from electricity and imported steam used in assets within our operational control.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's 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)
1778035

Emissions calculation methodology
Supplier-specific method
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
4

Please explain
The above emission represents our top 25 materials by volume, representing 80% of total mass purchased and 57% of total spent in 2021.

Capital goods

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

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

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7145

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The GHG emission was calculated using Electricity and Steam consumptions at all the assets within our operations control, and using emission factor from DEFRA.

Upstream transportation and distribution

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

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
8477

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The total emission was calculated from volume of waste generated at all our operating assets and emission factors from DEFRA

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
615

Emissions calculation methodology
Hybrid method
Site-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
17

Please explain
The data includes air travel and hotel stay globally by our employees. We took into consideration the regional variation of emission factors.

Employee commuting

Evaluation status
Not evaluated

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

Upstream 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
We do not have any leased assets

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

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
We have not yet started tracking this Scope 3 emission

Processing of sold products

Evaluation status
Relevant, not yet calculated

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
We have not yet started tracking this Scope 3 emission

Use of sold products

Evaluation status
Relevant, not yet calculated

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
We have not yet started tracking this Scope 3 emission

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

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
We have not started tracking this Scope 3 emission.

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
We do not have any downstream leased assets.

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
We do not have any franchise

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
We have a JV and based upon the size of the plant we estimate that it would not be material relative to our overall footprint.

Other (upstream)

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
No other upstream emission

Other (downstream)

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
No other downstream emission

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
0.44

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
404197

Metric denominator
metric ton of product

Metric denominator: Unit total
887138

Scope 2 figure used
Location-based

% change from previous year
6

Direction of change
Decreased

Reason for change
In 2020, Momentive undertook several actions that significantly reduced the energy consumption at our sites. One of the most impactful strategic steps was to establish a plan for streamlining our operational footprint. Beginning in 2021 and continuing into 2022, we exited high energy consuming basics chemical operations in North America and transitioned to focus on sustainable, advanced silicone technologies, investing in industries such as Electronics, Healthcare, Tire and Beauty & Personal Care.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
No

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Americas	154023.002
Asia, Australasia	38210.853
Europe, Middle East and Africa (EMEA)	23175.485

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)
Silicones	237448

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	237448	<Not Applicable>	All our products fall in this category
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Americas	65796.864	
Asia, Australasia	58973.798	
Europe, Middle East and Africa (EMEA)	26501.608	

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)
Silicones	166749	

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

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

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	166749		
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C-CH7.8

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

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology

C-CH7.8a

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

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	We do not sell products that are greenhouse gases
Methane (CH4)	0	We do not sell products that are greenhouse gases
Nitrous oxide (N2O)	0	We do not sell products that are greenhouse gases
Hydrofluorocarbons (HFC)	0	We do not sell products that are greenhouse gases
Perfluorocarbons (PFC)	0	We do not sell products that are greenhouse gases
Sulphur hexafluoride (SF6)	0	We do not sell products that are greenhouse gases
Nitrogen trifluoride (NF3)	0	We do not sell products that are greenhouse gases

C7.9

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

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	Our absolute consumption of renewable electricity remained more or less same compared to 2020.
Other emissions reduction activities	0	No change	0	We completed several energy efficiency projects in 2021 that resulted in decrease in our GHG emission. However, our production also increased resulting in overall increase in GHG emissions at these sites. At this time, we have not data to separate the two effects.
Divestment	0	No change	0	No divestment in 2021
Acquisitions	0	No change	0	No acquisition in 2021
Mergers	0	No change	0	No mergers in 2021
Change in output	8400	Increased	2.3	our overall output increased resulting in higher energy consumption and corresponding GHG emission
Change in methodology	0	No change	0	We updated our emission factors for 2021 as well as the base year. Therefore there is no change in GHG emission due to change in methodology.
Change in boundary	0	No change	0	No change in boundary
Change in physical operating conditions	28000	Decreased	7.5	Beginning in 2021 and continuing into 2022, we exited high energy consuming basics chemical operations in North America.
Unidentified	0	No change	0	NA
Other	0	No change	0	NA

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 15% but less than or equal to 20%

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	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)		1120637	1120637
Consumption of purchased or acquired electricity	<Not Applicable>	58558	282289	340847
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>		85223	85223
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	58558	1488149	1546708

C-CH8.2a

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

Consumption of fuel (excluding feedstocks)

Heating value
HHV (higher heating value)

MWh consumed from renewable sources inside chemical sector boundary
0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)
1120637

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary
0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary
1120637

Consumption of purchased or acquired electricity

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary
58558

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)
282289

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary
0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary
340847

Consumption of purchased or acquired steam

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary
0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)
85223

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary
0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary
85223

Total energy consumption

Heating value
<Not Applicable>

MWh consumed from renewable sources inside chemical sector boundary
58558

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)
1488149

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary
0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary
1546708

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	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
In 2021, Momentive did not consume any sustainable biomass.

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
In 2021, Momentive did not use any other biomass

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
In 2021, Momentive did not use any renewable hydrogen

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
In 2021, Momentive did not use any coal

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
8104

MWh fuel consumed for self-generation of electricity
8104

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
In 2021, Momentive used limited amount of diesel fuel to run generators to produce electricity

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
1112297

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam
1112297

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
The gaseous fuels were used to produce electricity, steam and was also used to provide direct heat. However their split has not been calculated for this report.

Other non-renewable fuels (e.g. non-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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No other types of fuel was used in 2021.

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
1120637

MWh fuel consumed for self-generation of electricity
8104

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
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
All diesel fuels were used to produce electricity using electric generators. Some amount of gaseous fuel was also used to produce electricity.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?
No

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
91496

Metric numerator
Waste (t)

Metric denominator (intensity metric only)
Production (t)

% change from previous year
5

Direction of change
Decreased

Please explain
Majority of decrease in our waste footprint came from shutting down our ChemOps assets. Other initiatives that resulted in reduction in our waste includes solvent recycling and process optimization.

Description
Energy usage

Metric value
6.26

Metric numerator
Total energy usage (Mega Joule)

Metric denominator (intensity metric only)
Production (in Kg)

% change from previous year
8

Direction of change
Decreased

Please explain
Decrease in energy intensity is the result of shutting down our energy intensive ChemOps assets.

C-CH9.3a

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

Output product
Specialty chemicals

Production (metric tons)
890000

Capacity (metric tons)

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

Electricity intensity (MWh per metric ton of product)

Steam intensity (MWh per metric ton of product)

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

Comment

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	One of our 2025 Sustainability Goal is to have 75% of our new products deliver sustainability benefits to our customer. One of the sustainability benefits is to develop low carbon products.

C-CH9.6a

(C-CH9.6a) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Process step integration	Full/commercial-scale demonstration	Please select		Our energy management strategy promotes efficient utility use at all sites. Most recently we have completed construction and startup of a major cogeneration project at our site in Termoli, Italy. We have also converted to LED lighting at several of our sites.
Product redesign	Please select	Please select		Using Green Chemistry principles, products are continuously evaluated and advancements in technology or technique are applied to improve existing processes.
Radical process redesign	Please select	Please select		Bio based materials are replaceing fossil or non-renewable components of our formulations.

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
Moderate assurance

Attach the statement
Y
Momentive Assurance Statement 2022.pdf

Page/ section reference
All

Relevant standard
AA1000AS

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
Moderate assurance

Attach the statement
Y

Page/ section reference

Relevant standard
AA1000AS

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: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Moderate assurance

Attach the statement
Y

Page/section reference
All

Relevant standard
AA1000AS

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?
No, we are waiting for more mature verification standards and/or processes

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, but we anticipate being regulated in the next three years

C11.1d

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

Our strategy is to understand the systems as they develop, and take actions consistent with good management practices for our industry. We have measuring systems in place now that are tracking data in a way that is suitable for use in a CTS. For instance, our carbon tracking system contains specific libraries for tracking carbon credits, and the system was tested. As the specific program requirements develop, we can simply plug the factors in to the existing system.

C11.2

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

No

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our suppliers

Yes, our customers/clients

C12.1a

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

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

Provide training, support, and best practices on how to make credible renewable energy usage claims

Directly work with suppliers on exploring corporate renewable energy sourcing mechanisms

Other, please specify (We provide Code of Conduct to our supplier featuring climate change KPIs)

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

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

0

Rationale for the coverage of your engagement

We would like to influence and engage our suppliers, one of our key stakeholder, in alignment with our sustainability priorities. In turn, we expect to better understand our supplier's priorities so that we can continually improve our own actions. Through this iterative process of engagement, reflection and realignment, we aim to improve the performance of the company while minimizing our impact on the planet. During the on-boarding of our new suppliers we provide copy of the supplier code of conduct and it is also referenced in our purchases order terms and conditions.

Impact of engagement, including measures of success

Percent of commodity managers trained worldwide on sustainable procurement principles and practices by 2021.

Comment

Our goal is to achieve 100% trained commodity managers worldwide on sustainable procurement principles and practices by 2021. We have achieved this target in 2021.

C12.1b

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

Type of engagement & Details of engagement

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

% of customers by number

0

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

0

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

Our customers with higher perceived exposure to consumer demand for engagement are prioritized, as are those customer companies with well-defined and well established sustainability programs.

Impact of engagement, including measures of success

Limited. Program is in early stages.

C12.2

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

No, but we plan to introduce climate-related requirements within the next two years

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

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

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, but we 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 engagement activities are consistent with your overall climate change strategy

In line with expectations of our stakeholders and consistent with our Core Values and Safety and Sustainability Policy, Momentive is committed to implementing business practices that improve not only financial results, but environmental, social and corporate governance performance.1 To this end, Momentive has developed several policies, standards and procedures related to corporate social responsibility that together constitute our ESG Management System. For details, please visit: https://www.momentive.com/docs/default-source/generalcontent/sustainability/momentive-2021-esg-commitment.pdf?sfvrsn=a46d6884_2

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>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

C12.3b

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

Trade association
American Chemistry Council

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

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
ACC actively works to promote the safe use of chemicals by industry. They have recently released a set of industry-wide Sustainability Principles that articulate the chemical industry's commitments to sustainability, including advancing safe, innovative, effective chemical products, materials and technologies that help address climate change, hunger, clean water, energy needs and global standards of living.

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

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
Other, please specify (Global Silicone Council)

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

Has your organization influenced, or is your organization attempting to influence their position?
We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
GSC's objective is to promote the safe and sustainable use and stewardship of silicones products globally. Momentive has teamed up with GSC to fund various research and studies on how Silicones contribute to the sustainability of our stakeholders.

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

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 mainstream reports

Status
Underway – previous year attached

Attach the document
Y
2021-report.pdf

Page/Section reference
Please refer to sections: Chapter 2 - Vision 2025 Chapter 3 - Sustainability at Momentive Chapter 5 - Products Chapter 6 - Planet

Content elements
Governance
Strategy
Emissions figures
Emission targets
Other metrics

Comment
This is our 2020-2021 Sustainability Report

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, but we 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, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

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

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) 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, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

C15.5

(C15.5) 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, we do not use indicators, but plan to within the next two years	Please select

C15.6

(C15.6) 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, EHS & Operations Excellence	Other C-Suite Officer

SC. Supply chain module

SC0.0

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

See intro section

SC0.1

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

	Annual Revenue
Row 1	2680000000

SC1.1

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

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	We must develop systems that will allow us to allocate consumed resources to produced product, and then aggregate across products, customers and sites to be able to allocate total impacts.
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	A single customer may take several different products from several different plants and locations at various times and differing schedules over a given period of time. Allocating all the variables across complex customers is very difficult.
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	We have manufacturing and R&D locations in many countries and regions.

SC1.4

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

SC1.4a

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

We're improving our materials planning processes which will improve our ability to assess input quantities per unit of production; we're improving our KPI capture for emissions, energy, waste and water which will improve our knowledge of outputs. We plan to tie this together in a sustainability data management platform that will improve our ability to allocate inputs, outputs and products created. We are also in the process of estimating detailed Scope 3 emission as well as performing life cycle assessment for select products and customers.

SC2.1

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

SC2.2

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

SC2.2a

(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

SC4.1

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

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms