Avery Dennison Corporation - Climate Change 2019



C0. Introduction

C0.1

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

Avery Dennison Corporation (NYSE: AVY) is a global materials science and manufacturing company specializing in the design and manufacture of a wide variety of labeling and functional materials. The company's products, which are used in nearly every major industry, include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical and retail applications; tags, labels and embellishments for apparel; and radio-frequency identification (RFID) solutions serving retail apparel and other markets. Our reportable segments for fiscal year 2018 were (i) Label and Graphic Materials ("LGM"); (ii) Retail Branding and Information Solutions ("RBIS"); and (iii) Industrial and Healthcare Materials ("IHM"). In 2018, the LGM, RBIS, and IHM segments made up approximately 68%, 23% and 9%, respectively, of our total sales. In 2018, international operations constituted a substantial majority of our business, representing approximately 76% of our sales. As of December 31, 2018, we operated approximately 180 manufacturing and distribution facilities worldwide with approximately 30,000 employees and had operations in over 50 countries, with 2018 sales of \$7.2 billion.

C0.2

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

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

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

Argentina Australia Bangladesh Belgium Brazil Bulgaria Canada Chile China China, Hong Kong Special Administrative Region Colombia Czechia Denmark Dominican Republic Egypt El Salvador France Germany Honduras India Indonesia Ireland Italy Japan Luxembourg Malaysia Mexico Morocco Netherlands New Zealand Norway Pakistan Peru Poland Portugal Republic of Korea Romania Singapore South Africa Spain Sri Lanka Switzerland Taiwan, Greater China Turkey United Arab Emirates United Kingdom of Great Britain and Northern Ireland United States of America Viet Nam

C0.4

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

C0.5

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

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance	
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]	
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]	
Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]	
Consumption	Direct operations only [Processing/manufacturing/Distribution only]	

C-AC0.6b/C-FB0.6b/C-PF0.6b

(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Do not own/manage land

Please explain

Avery Dennison works with suppliers and does not own or manage their own land.

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Timber

% of revenue dependent on this agricultural commodity Don't know

Produced or sourced

Sourced

Please explain

The percentage of procurement spend on paper is known internally but is not disclosed externally for competitive reasons.

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	Please explain
individual(s)	
	As part of his annual CEO Performance Evaluation, our CEO is measured on our progress towards our 2025 sustainability goals, including for 2018 reducing greenhouse gas (GHG) by 3% and ensuring at least 95% of sites are landfill-free.

C1.1b

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

	Governance mechanisms into which climate-related issues are integrated	Please explain
agenda item	climate-related issues are integrated	
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Scheduled – some meetings		Reviewing Avery Dennison's stated emission reduction targets, and progress against them, at regularly scheduled meetings
	of objectives	allows our board, acting through its Governance and Social Responsibility Committee, to be continuously updated and aware
	Monitoring and overseeing progress against	of climate issues.
	goals and targets for addressing climate-	
	related issues	

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues	
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than 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 climaterelated issues are monitored (do not include the names of individuals).

In 2018, leadership over ensuring meaningful progress towards achieving our 2025 sustainability goals transitioned from our President and CEO, to the Vice President and General Manager of our Retail Branding and Information Solutions (RBIS) business. Our Sustainability Council, comprised of an expanded group of functional and business leaders to help drive broad accountability and accelerate our progress, meets bi-monthly and updates our executive leadership team quarterly. The Council has the following four work streams to help focus its efforts, each of which is led by an internal leader from one of our businesses: operations; technology and innovation; products and solutions; and social impact and transparency. Board oversight over sustainability is primarily conducted by the Governance Committee, which receives a report from management at least once a year. In addition, our full Board hears from our business leaders on our sustainability initiatives during its regular review of our business strategies.

C1.3

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

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

Who is entitled to benefit from these incentives? Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized Emissions reduction target

Comment

One of the six strategic objectives by which our CEO's performance evaluation is measured is Sustainability and Diversity. Specifically, the following measures are considered: "Make progress toward 2025 sustainability goals, including reducing greenhouse gas (GHG) emissions by 3%; ensure at least 90% of sites are landfill free, and evaluate gender pay equity and begin to adjust compensation as appropriate." In 2018, Avery Dennison exceeded 3% GHG reduction target; achieved over 95% of sites as landfill-free; and evaluated our gender pay equity with positive results, developing plans to make identified adjustments to compensation for 2019. Performance-Based Compensation Target total direct compensation (TDC) for our executives is comprised of the following three components: Base salary; Performance-based annual cash incentive under our Annual Incentive Plan (AIP); and Long-term incentives delivered in performance-based equity awards, consisting 50% of performance units (PUs) and 50% of market-leveraged stock units (MSUs). The CEO's award under the 2018 Annual Incentive Plan was impacted in part by his performance against the sustainability goals.

Who is entitled to benefit from these incentives?

Energy manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

Environmental/Sustainability managers have overall accountability for ensuring public reduction targets are met.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized Behavior change related indicator

Comment

Each plant manager has strategic plans that include a number of key initiatives of which greenhouse gas reduction is one. Overall performance is measured against these key targets.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives Monetary reward

Activity incentivized

Efficiency target

Comment

Each plant manager has strategic plans that include a number of key initiatives of which greenhouse gas reduction is one. Overall performance is measured against these key targets.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized Efficiency project

Comment

Performance-based annual Avery Dennison "Thank You" awards for activities such as sustainable product development and implementing projects with increased efficiency that lead to significant energy savings and progress towards emissions reductions.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	5	
Long-term	5	10	

C2.2

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

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

C2.2a

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

	Frequency	How far into	Comment
		the future	
	monitoring		
		considered?	
Row	Six-monthly	>6 years	We collect data from our web-based sustainability tracking tool monthly, which is consolidated and reported to both operational and executive-level management. The Board's
1	or more		Governance and Social Responsibility Committee, whose responsibilities include reviewing and assessing climate change risks and opportunities, meets at least three times a
	frequently		year and the business unit sustainability steering committees meet four to six times a year. We report results to the Sustainability Steering Committee, the Corporate Leadership
			Team and with the Board of Directors. In addition, Avery Dennison has a communication plan for engagement with internal and external stakeholders regarding energy and climate
			change actions and progress. Avery Dennison communicates with investors, shareholders and employees through our Annual Report, our Sustainability Report, the CDP, and our
			corporate website.

C2.2b

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

i) At a company level, the Sustainability Steering Committee identifies, reviews, and, if necessary, acts on climate change related risks and opportunities brought by business unit experts in sustainability and environmental, health, and safety. Climate-change related efforts are guided by our Sustainability Charter, which has three core principles related to People, Planet and Prosperity.

ii) At the asset level, Avery Dennison has introduced a number of processes that are designed to assess climate change-related performance, risks and opportunities. These processes are ongoing and include:a. Maintaining a web-based sustainability data collection tool. This tool, which is currently being used to collect, among other things, data relating to our energy usage/carbon footprint, is an ongoing mechanism used for decision-making purposes.b. At the product and customer level, Avery Dennison assesses risks/opportunities through detailed customer research and life cycle analysis of its products. These assessments then support expansion of our sustainable product offerings to ensure that the company takes advantage of evolving opportunities. For example, Avery Dennison has developed an LCA-based environmental assessment tool for sustainable product development known as "Avery Dennison Greenprint" that helps customers understand the relative environmental impacts of the products that they buy. We use the Avery Dennison Greenprint tool in our two major business units: Label and Graphic Materials and Retail Branding and Information Solutions.

Avery Dennison prioritizes climate change risks and opportunities based on impact to our business and the immediacy and likelihood of occurrence. We conduct a materiality assessment on a biennial basis to ensure we address the sustainability issues most important to our stakeholders and businesses. To identify the issues, we reviewed a variety of sources, including internal strategic plans and reports, customer surveys, media coverage, and Internet postings. We also interviewed more than 35 internal subject matter experts who interact frequently with our various stakeholders. By proactively addressing our material issues, we believe we will create products and programs that fuel our ongoing business success.

C2.2c

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

	1	
	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Avery Dennison considers current regulation risks to be relevant to our business, primarily due to the potential impact this could have on our operations as well as customer demand for our product. Avery Dennison's business units are responsible for continuing to evaluate current regulations and identify ways to mitigate regulatory risks.
Emerging regulation		We consider emerging regulations to be relevant to our business, primarily due to the potential impact they could have on our operations as well as customer demand for our products. Ou business units are responsible for continually monitoring the global regulatory landscape to ensure that they are adjusting their strategies and implementing mitigating measures as appropriate to proactively address potential regulations that are likely to be implemented
Technology	Relevant, sometimes included	
Legal	Relevant, always included	We consider the laws of all the countries in which we do business in developing our business strategies and in the ways in which we are seeking to mitigate the risk of climate change. We implement measures that comply with local laws as we seek to reduce our own emissions, and in developing products that have a lower carbon footprint downstream. As much as this involves intellectual property, we actively conduct right-to-market studies to ensure we don't infringe on the intellectual property rights of others.
Market	Relevant, sometimes included	
Reputation	Relevant, sometimes included	Maintaining our reputation as an ethical business is at the core of everything we do The impact any of our actions, including being seen as failing to be a good corporate citizen by addressing climate change in any way we reasonably can, is a central tenet of our risk assessments.
Acute physical	Relevant, sometimes included	
Chronic physical	Relevant, sometimes included	
Upstream	Relevant, sometimes included	
Downstream	Relevant, sometimes included	

C2.2d

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

i) At a company level, the Sustainability Steering Committee identifies, reviews, and, if necessary, acts on climate change related risks and opportunities brought by business unit experts in sustainability and environmental, health, and safety. Climate-change related efforts are guided by our Sustainability Charter, which has three core principles related to People, Planet and Prosperity.

ii) At the asset level, Avery Dennison has introduced a number of processes that are designed to assess climate change-related performance, risks and opportunities. These processes are ongoing and include:a. Maintaining a web-based sustainability data collection tool. This tool, which is currently being used to collect, among other things, data relating to our energy usage/carbon footprint, is an ongoing mechanism used for decision-making purposes.b. At the product and customer level, Avery Dennison assesses risks/opportunities through detailed customer research and life cycle analysis of its products. These assessments then support expansion of our sustainable product offerings to ensure that the company takes advantage of evolving opportunities. For example, Avery Dennison has developed an LCA-based environmental assessment tool for sustainable product development known as "Avery Dennison Greenprint" that helps customers understand the relative environmental impacts of the products that they buy. We use the Avery Dennison Greenprint tool in our two major business units: Label and Graphic Materials and Retail Branding and Information Solutions.

Avery Dennison prioritizes climate change risks and opportunities based on impact to our business, and the immediacy and likelihood of occurrence. We conduct a materiality assessment on a biennial basis to ensure we address the sustainability issues most important to our stakeholders and businesses. To identify the issues, we reviewed a variety of sources, including internal strategic plans and reports, customer surveys, media coverage, and Internet postings. We also interviewed more than 35 internal subject matter experts who interact frequently with our various stakeholders. By proactively addressing our material issues, we believe we will create products and programs that fuel our ongoing business success.

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

Primary climate-related risk driver Policy and legal: Other

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Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

Because Avery Dennison is a worldwide company, we face a constantly changing array of environmental regulations with which we must comply. Climate change regulation could affect our operations in one or more regions in the world by increasing operational costs by affecting the prices of key inputs such as electricity and natural gas.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure? Yes, a single figure estimate

Potential financial impact figure (currency) 3000000

Potential financial impact figure – minimum (currency)

<Not Applicable>
Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Although direct energy costs are not a significant portion of the Company's operating costs, if we are unable to reduce energy consumption, energy costs could rise. A five percent increase in electric and natural gas costs resulting from taxes or regulations could result in more than \$3 million per year in additional costs.

Management method

Avery Dennison goes beyond complying with current environmental regulations. We actively track energy use across our operations and have reduced energy consumption by implementing numerous efficiency measures--we organized large-scale kaizen initiatives designed to remove or reduce energy and material-intensity of manufacturing processes at our twenty most energy-intensive facilities. For example, we reduced heat curing requirements in our heat printing processes at RBIS facilities by using more efficient inks and operating printing presses at standard, more efficient settings. Similarly, at LGM's coating facilities, we have optimized the temperatures and throughput of our drying ovens. These measures are being expanded to other facilities to better enable us to mitigate the potential risk of cost increases.

Cost of management

Comment

0

Included in the cost of doing business, so we estimate these cost to be \$0. The cost of these actions is typically combined with broad sustainability and business initiatives including carbon, energy, and other environmental concerns.

Identifier Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type Transition risk

Primary climate-related risk driver Market: Changing customer behavior

Type of financial impact

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

Company- specific description

Increased customer attention on the environmental performance of products, including the carbon footprint, could affect their selection of Avery Dennison's products. While consumer concern is still wide ranging, no single area has risen to prominence faster than plastic packaging sustainability in the consumer packaged goods industry.

Time horizon Medium-term

Likelihood Likely

Magnitude of impact Medium-low

Are you able to provide a potential financial impact figure? Yes, a single figure estimate

Potential financial impact figure (currency) 70000000

Potential financial impact figure – minimum (currency) <Not Applicable>

Potential financial impact figure – maximum (currency) <Not Applicable>

Explanation of financial impact figure

We are already responding to changing consumer behavior driven by a demand for more sustainable products. The financial implications of the risk would be determined by the market shift. With sales of approximately \$7.2 billion in 2018, a 1% shift, absent mitigation, would represent a loss of approximately \$70 million in sales.

Management method

Plastic packaging sustainability in the consumer goods industry presents the greatest strategic challenge to our LGM and RBIS businesses. Plastic is widely used for packaging because of its barrier properties (reduced food waste), lightweight (reduced logistics cost), versatility, durability and low cost. Our strategy to address this challenge is based on the following building blocks: Develop a comprehensive portfolio of pressure-sensitive label materials for use on consumer plastic packaging in line with the targets of a circular economy. This involves label materials which separate during the recycling process as well as the use of recycled content in manufacturing our products. Our aim is to provide both at price parity to existing label materials in order to quickly penetrate the space and establish the industry standard. Expand the competitive product portfolio of recycled content products, add new solutions to enable circularity and transparency Enhance our product and social compliance processes to drive greater supply chain transparency for brands and factories Reduce our environmental impact with focus on GHG, zero contamination of water, recycling of industry waste (internal and external), and responsible management of our films and chemicals. Avery Dennison has made much progress on our current 8 sustainability goals . We believe that by implementing the strategies above, Avery Dennison is well set up to be the future sustainability leader in its industry.

Cost of management 200000

20000

Comment

One of the greatest changes in our end markets since 2018 has been the acceleration of the awareness of, needs for and urgency to deliver more sustainable solutions. Consumer sentiment on the need for broader climate change action has escalated, and is not only driving increased expectations from companies but also pressuring governmental bodies around the world to take more legislative action. While consumer concern is still wide ranging, no single area has risen to prominence faster than plastic packaging sustainability in the consumer packaged goods industry. Given the lack of current technology/substitutes to address this, there is a pressing need to establish a circular economy to manage and deal with recycling and reusing plastic. We are investing \$200,000 annually in developing and marketing products that help reduce environmental impact. Conducting Life Cycle Assessments of our products costs approximately \$30,000 per product.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type Physical risk

Primary climate-related risk driver

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

Type of financial impact

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

Company- specific description

Time horizon Long-term

Likelihood About as likely as not

Magnitude of impact Medium-low

Are you able to provide a potential financial impact figure? Please select

Potential financial impact figure (currency) <Not Applicable>

Potential financial impact figure – minimum (currency) <Not Applicable>

Potential financial impact figure – maximum (currency) <Not Applicable>

Explanation of financial impact figure

Management method

Cost of management

Comment

C2.4

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

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resilience

Primary climate-related opportunity driver Resource substitutes/diversification

Type of financial impact

Other, please specify (Reduced operational costs)

Company-specific description

Avery Dennison could efficiently meet reporting obligations due to our multiple year experience with carbon and energy management tracking and reporting on a voluntary basis. This experience can create a cost advantage relative to less prepared competitors.

Time horizon Short-term

Likelihood Very unlikely

Magnitude of impact Medium-low

Are you able to provide a potential financial impact figure? Yes, a single figure estimate

Potential financial impact figure (currency) 20000

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Specific costs associated with emissions reporting obligations will vary based on the type of program, scope, and implementation (approximately \$20,000); Avery Dennison has several years of experience measuring and voluntarily reporting emissions data, and may be more prepared for reporting requirements than competitors, resulting in a potential cost advantage. We have become increasingly more efficient at preparing our corporate GHG inventory.

Strategy to realize opportunity

Avery Dennison will continue to use the extensive amount of energy and GHG information collected over the last decade into the present to prioritize energy reduction efforts on the sites and regions where the largest reductions can be realized with the available resources. We anticipate that this continuing effort will generate reduced operational costs through energy savings and less need for pollution management.

Cost to realize opportunity

100000

Comment

Included in the cost of doing business, so we estimate cost to be \$0. The cost of these actions are combined with other sustainability and business initiatives and strategies. We estimate we invested approximately \$100,000 to update our sustainability database.

Identifier

Opp2

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

Opportunity type

Resilience

Primary climate-related opportunity driver

Participation in renewable energy programs and adoption of energy-efficiency measures

Type of financial impact

Other, please specify (Reduced capital costs)

Company-specific description

Within regions of China where Avery Dennison operates, stricter environmental regulations are being proposed that would significantly impact our facilities. The regulations are targeting a reduction in volatile organic compounds (VOCs) from industrial operations. Avery Dennison is well-positioned to meet or exceed these proposed targets, providing us an opportunity in the market. Due to our global policies and procedures, our China plants are below the limits of the regulations that have come into effect in the relevant provinces and therefore gives a competitive advantage over competitors who had higher VOC emissions.

Time horizon Short-term

Likelihood Very likely

Magnitude of impact Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

100000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Based on the cost of environmental compliance at other Chinese facilities, it is expected that avoided fees could exceed \$100,000 annually.

Strategy to realize opportunity

To maintain compliance with additional regulation, establishing relative standards and monitoring systems will be required. Additionally, promotion of sustainability efforts and concepts by the Chinese government can effectively demonstrate the need for compliance.

Cost to realize opportunity

0

Comment

Avery Dennison is in the process of reducing VOCs from select products through its Research and Development efforts. This is already a part of our R&D budget and would not require additional costs to realized this opportunity.

Identifier

Opp3

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

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Customers increasingly judge products based on their environmental performance. Avery Dennison has the opportunity to increase sales by developing products that have relatively lower carbon footprint than our competitors.

Time horizon

Short-term

Likelihood Likelv

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure? Yes, a single figure estimate

Potential financial impact figure (currency) 70000000

Potential financial impact figure – minimum (currency) <Not Applicable>

Potential financial impact figure – maximum (currency) <Not Applicable>

Explanation of financial impact figure

We are responding to changing consumer behavior driven by a demand for more sustainable products, such as our ThinStream products that combine an ultra-thin PET liner material with patented machine technology to yield 17% more labels per roll. The financial implications of the opportunity would be determined by the market shift. With sales of approximately \$7.2 billion, a 1% shift, absent mitigation, would represent approximately \$70 million in sales.

Strategy to realize opportunity

To manage these opportunities we are expanding our sustainable product offerings through detailed customer research and life cycle analysis of our products. Our analysis has helped us focus our product innovation on reducing the environmental impact of the materials found in our products by: 1. Designing thinner and lighter labeling and trim materials 2. Developing bio-based adhesives formulations that reduce consumption of fossil-based materials 3. Designing products that facilitate recycling. We utilize our environmental assessment tool known as "Avery Dennison Greenprint" to help U.S. and European customers estimate the relative energy savings and GHG emissions reductions of the products they buy. The Avery Dennison Greenprint tool has been used in our two major business units: Label and Packaging Materials and Retail Branding and Information Solutions. For example, we help brands and retailers communicate their product sustainability to consumers.

Cost to realize opportunity

200000

Comment

The costs associated with these actions include investing \$200,000 annually in developing and marketing products that help reduce environmental impact. Conducting Life Cycle Assessments of our products cost approximately \$30,000 per product.

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

	Impact	Description
Products and services	Not yet impacted	
Supply chain and/or value chain	Not yet impacted	
Adaptation and mitigation activities	Not yet impacted	
Investment in R&D	Not yet impacted	
Operations	Not yet impacted	
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Not yet impacted	
Operating costs	Not yet impacted	
Capital expenditures / capital allocation	Not yet impacted	
Acquisitions and divestments	Not yet impacted	
Access to capital	Not yet impacted	
Assets	Not yet impacted	
Liabilities	Not yet impacted	
Other	Please select	

C3. Business Strategy

C3.1

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

C3.1a

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

$\texttt{C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b/C-ST3.1b$

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-FF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy. Yes

C3.1c

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

A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues:

Avery Dennison's business strategy focuses on top line growth in all markets, operational excellence and attracting and retaining talent. We recognize that climate change is an important global issue with potential implications to our business. Our Energy and Climate Change Strategy corresponds with our business and sustainability strategies, and includes an established science-based target to reduce absolute greenhouse gas emissions by at least 26% (3% per year) by 2025, compared to a 2015 baseline. Our Sustainability Charter lays out the primary tenants of how we influence our business strategy to integrate sustainability and climate change through the following goals: More sustainable products - Avery Dennison will improve the energy and carbon footprint of our products and services through innovation and life cycle management. For example, our Greenprint tool houses our environmental product information, which we use for internal decision making and discussion with customers. More sustainable processes - Avery Dennison will improve the energy of our operations and will work toward continual improvement at all facilities. We collect data from our web-based sustainability tracking tool monthly, consolidated and passed to both operational and executive-level management. The Board's Governance and Social Responsibility Committee, whose responsibilities include reviewing and assessing climate change risks and opportunities, meets at least three times a year and the business unit sustainability steering committees meet four to six times a year.

We report results to the Corporate Leadership Team and the Board of Directors.- More sustainable purpose: Avery Dennison will communicate and engage with key stakeholders to achieve our energy and climate change goals and to meet the interests of customers, shareholders, employees, and the communities where we operate. Avery Dennison has a communication plan for engagement with internal and external stakeholders regarding energy and climate change actions and progress. Avery Dennison communicates with investors, shareholders, and employees through our Annual Report, our Corporate Sustainability Report, the CDP, and our corporate website. We have embedded sustainability into our strategic planning, innovation and operations processes, and are rigorously measuring performance in this area.

The aspects of climate change that have influenced Avery Dennison's strategy include regulatory, physical and consumer-related risks and incentives-based opportunities. The most substantial business decisions made include expanding use of life cycle assessment in product design, along with partnering and membership in NGO organizations with a focus on GHG reduction. These activities were influenced by stakeholder requests, brand differentiation, desire for a leadership position in sustainability, and reducing energy costs.

Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target:

One of our eight sustainability goals set in 2015 is related to reducing greenhouse gas emissions. Specifically, the goal was to achieve at least 3 percent absolute reduction year over year. Instead of measuring our emissions as indexed to net sales, we planned to measure them—and reduce them—in absolute terms. By basing our approach on The 3% Solution developed by World Wildlife Fund, CDP and McKinsey & Company, we aim to cut emissions by a minimum of 26 by 2025. We'll do so by looking beyond energy efficiency to renewable sources, fuel switching and other strategies.

What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects (e.g., investment, location, procurement, M&As, R&D, etc.):

The most important components of the long term strategy that have been influenced by climate change include redefining our sustainability goals. In 2015, we set out to reach eight sustainability goals by 2025. In the time since, we've made steady progress toward nearly all of them. We've also learned that our original goals are a bit narrow, and that pursuing them exclusively limits our ability to effect change and address all the issues relevant to our business. This year, equipped with an updated understanding of the specific social and environmental challenges that affect our company and stakeholders—of those areas where we can and should make the greatest difference—we've distilled our eight original goals into three broader ones: 1-Deliver innovations that advance the circular economy; 2-Reduce the environmental impact in our operations and supply chain; and 3-Be a force for good, adding value for all our stakeholders.

Our original goals still exist as targets within these new broader goals, and we're as committed as ever to meeting them. Broadening our aims gives us the latitude to take action in new ways to meet emerging challenges, the always-evolving expectations of our stakeholders and the high standards demanded by our own values. Refreshing our goals also gives our thirty thousand-plus people around the world an opportunity to reflect, re-commit, and re-energize as we continue toward our 2025 goal year.

An additional substantive business decision made during the reporting year includes our commitment to renewable energy in the form of signing a 30MW US wind virtual power purchase agreement (vPPA). This vPPA will have an estimated emissions reduction of 98,800 metric tons CO2e annually. Additional substantial business decisions were our Pune and Kunshun onsite solar rooftop panels, where in Pune 1 MW of onsite solar panels were installed and in Kunshun 0.8Mwh of an on-site solar power purchase agreement was implemented.

C3.1d

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

Climate-	Details
related	
scenarios	
Other, please	For emissions, S1-3, we are connecting our 2025 objectives (e.g., reduction, certified sourcing, recycling, recycling content) to reductions in GHG emissions using Climate Earth to model the
specify (The	scenarios of 25% vs. 50% vs. 75% use of recycled content in our products. From there we link our innovation roadmap to continued progress toward higher-level scenarios. We have an annual
3% Solution	process for evaluating industry scenarios across our business units. Ranging from business as usual to potential impacts from legislation and brand focus on eliminating single-use plastic. We
from WWF,	model the likelihood and impact of our current businesses to inform our marketing, technology, sales, and legal strategies. Our approach is based on the 3% Solution developed by World Wildlife
CDP, and	Fund, CDP and McKinsey & Company. Because our facilities require different solutions based on their design and location, we're pursuing reductions through a variety of means, such as
McKinsey &	improving energy efficiency, sourcing renewable power and procuring renewable energy certificates.
Company)	

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.

As a member of World Wildlife Fund's Climate Savers and the Renewable Energy Buyers Alliance, and as a signatory of the American Businesses Act on Climate Pledge, we support the global effort to reduce greenhouse gas emissions (GHGs) and keep global temperatures to less than two degrees Celsius above pre-industrial levels. We believe that every sector of society, including business, must do its part to help reach those targets.

We're working specifically to reduce the carbon emissions from powering our more than 180 facilities. Almost all of the energy we use comes from electricity or natural gas. Our aim is to lower absolute emissions by at least 3 percent each year between 2015 and 2025—a minimum of 26 percent in total. Our approach is based on The 3% Solution developed by World Wildlife Fund, CDP and McKinsey & Company. Because our facilities require different solutions based on their design and location, we're pursuing reductions through a variety of means, such as improving energy efficiency, sourcing renewable power and procuring renewable energy certificates. In 2018, we entered into a renewable energy virtual power purchase agreement (vPPA) in the United States. Under the agreement, the off-take for Avery Dennison will be 30 MW of renewable energy capacity from Plum Creek Wind. This US wind vPPA is expected to generate 127,550 MWh annually toward Avery Dennison's operations, where we expect the owned renewable energy certificates to offset the equivalent of 98,800 metric tons CO2e annually. The estimated lifetime of the vPPA project is 12 years.

Additional goals set with WWF include covering the equivalent of 100 percent of electricity consumption at Avery Dennison's U.S. operations with renewable energy by 2025 and addressing climate change through other areas of operations, such as maximizing use of paper made with recycled or certified wood fiber (sourcing only from certified sources by 2025).

C4. Targets and performance

Target reference number

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.

Abs 1 Scope Scope 1 +2 (market-based) % emissions in Scope 100 Targeted % reduction from base year 26 Base year 2015 Start year 2015 Base year emissions covered by target (metric tons CO2e) 716311 Target year 2025 Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

100

Target status Achieved

Please explain

Our goal is to achieve at least a 3% absolute reduction year over year. By basing our approach on The 3% Solution developed by World Wildlife Fund, CDP and McKinsey & Company, we'll cut emissions by a minimum of 26 percent over the next decade.

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

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	6	
To be implemented*	5	99158
Implementation commenced*	6	2144
Implemented*	71	125422
Not to be implemented	0	

C4.3b

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

Initiative type Energy efficiency: Processes

Description of initiative Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e) 2560.97

Scope Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

0

Annual monetary savings (unit currency – as specified in C0.4) 200000

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

Payback period <1 year

Estimated lifetime of the initiative 21-30 years

Comment Chill Water Loop Temperature Increase

Initiative type Low-carbon energy installation

Description of initiative Solar PV

Estimated annual CO2e savings (metric tonnes CO2e) 1435.14

Scope Scope 1

Voluntary/Mandatory Voluntary

Annual monetary savings (unit currency – as specified in C0.4) 155000

Investment required (unit currency – as specified in C0.4) 752000

Payback period

4 - 10 years

Estimated lifetime of the initiative

21-30 years

Comment

Installation of 1MW on-site solar panels

Initiative type

Energy efficiency: Building services

Description of initiative Lighting

Estimated annual CO2e savings (metric tonnes CO2e) 89.84

Scope Scope 2 (location-based)

Voluntary/Mandatory Voluntary

Annual monetary savings (unit currency – as specified in C0.4) 13121

Investment required (unit currency – as specified in C0.4) 88458

Payback period 4 - 10 years

Estimated lifetime of the initiative 6-10 years

Comment LED Lighting Compounding

Initiative type Energy efficiency: Building services

Description of initiative Other, please specify (Dryer supply fan modifications)

Estimated annual CO2e savings (metric tonnes CO2e) 129.29

Scope 2 (location-based)

Voluntary/Mandatory Voluntary

Annual monetary savings (unit currency – as specified in C0.4) 28000

Investment required (unit currency – as specified in C0.4) 1000

Payback period 1-3 years

Estimated lifetime of the initiative 3-5 years

Comment Dryer supply fan modifications

C4.3c

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

Method	Comment
Dedicated budget for other emissions reduction activities	Avery Dennison has a dedicated budget for emission reduction activities, particularly as it relates to our GHG reduction targets. In 2018, we signed a 30MW US wind vPPA, set to come online in 2020.
Compliance with regulatory requirements/standards	Avery Dennison complies with local government regulations.
Dedicated budget for energy efficiency	We have annual capital budgets used for operational efficiency improvement projects, several of which are related to the reduction of energy intensity.

C4.5

C4.5a

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

Level of aggregation Group of products

Description of product/Group of products

In developing labeling and graphic materials with a smaller carbon footprint, Avery Dennison enables its customers to reduce the carbon footprint of their products. Avery Dennison has conducted a number of life cycle assessment (LCA) to identify opportunities to reduce the energy and carbon footprint of our major product lines. Findings to date have shown that the principal opportunities for reducing the environmental impact of our pressure-sensitive labeling and graphics materials lie in the selection of raw materials and the end-of-life disposal of those materials. In contrast, we estimate the manufacturing phase of our products' life cycle contributes approximately 10% of the overall impact on the major environmental indicators. These findings have helped us focus our product innovation on reducing the environmental impact of the materials found in our products by: 1. Designing thinner, lighter labeling and trim materials 2. Developing bio-based adhesives formulations that reduce consumption of fossil-based materials 3. Designing products that facilitate recycling. For example, Avery Dennison ThinStream products combine an ultra-thin PET liner material with patented machine technology to yield 17% more labels per roll. With more labels per roll, customers can operate more efficiently by reducing the frequency of roll change-overs and decrease associated GHG emissions with transporting fewer rolls of materials. We utilize our environmental assessment tool, known as "Avery Dennison Greenprint" to help leading environmental footprint will hopefully influence the customer's choice of product. Avery Dennison also provides materials ("inlays" and tags) for use in radio frequency identification (RFID) applications. RFID technology can enable large-scale retail organizations and consumer products 'carbon footprint and capturing other supply chain -related GHG emissions. Access to more sophisticated supply chain data can also assist companies in calculating their products' carbon footprint and capturing other supply

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

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions Other, please specify (Avery Dennison GreenPrint)

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

Comment

C5. Emissions methodology

C5.1

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

Scope 1

Base year start January 1 2015

Base year end December 31 2015

Base year emissions (metric tons CO2e) 213067

Comment

Scope 2 (location-based)

Base year start January 1 2015

Base year end December 31 2015

Base year emissions (metric tons CO2e) 619896

Comment

Scope 2 (market-based)

Base year start January 1 2015

Base year end December 31 2015

Base year emissions (metric tons CO2e) 503244

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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) 213067

Start date January 1 2018

End date

December 31 2018

Comment

C6.2

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

Row 1

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

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

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

Reporting year

Scope 2, location-based 619896

Scope 2, market-based (if applicable) 503244

Start date January 1 2018

End date

December 31 2018

Comment

C6.4

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

C6.5

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

Purchased goods and services

Evaluation status Relevant, calculated

Metric tonnes CO2e

2473251.5

Emissions calculation methodology

Avery Dennison has partnered with Climate Earth for calculating Scope 3 totals which are relevant to our business. For calculating upstream impacts Climate earth utilizes environmental extended input-output LCA (EEIO). EEIO analysis relies on financial data to make assessments of cradle-to-gate environmental impacts. We utilize the US EPA's model as the as the basis for calculation. The EPA model has calculated environmental impacts of industries in the form of impact/dollar. Climate Earth maps a customer's spend by purchase category to these factors to produce an upstream LCA. The result is a complete analysis of the upstream supply chain including analysis by supplier, category, and tier. Impact is calculated by the basic formula of: Activity Data x impact factor = impact So, for example, spend(\$) x impact factor(kgCO2e/\$) = impact(kgCO2e). This includes totals from our RBIS and LGM lines of business

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

100 Explanation

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e 44521.6

Emissions calculation methodology

Avery Dennison has partnered with Climate Earth for calculating Scope 3 totals which are relevant to our business. For calculating upstream impacts Climate earth utilizes environmental extended input-output LCA (EEIO). EEIO analysis relies on financial data to make assessments of cradle-to-gate environmental impacts. We utilize the US EPA's model as the basis for calculation. The EPA model has calculated the environmental impacts of industries in the form of impact/dollar. Climate Earth maps a customer's spend by purchase category to these factors to produce an upstream LCA. The result is a complete analysis of the upstream supply chain including analysis by supplier, category, and tier. Impact is calculated by the basic formula of: Activity Data x impact factor = impact So, for example, spend(\$) x impact factor(kgCO2e/\$) = impact(kgCO2e). This includes totals from our RBIS and LGM lines of business

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

100

Explanation

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

Emissions calculation methodology

This includes totals from our RBIS and LGM lines of business.

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

Explanation

Upstream transportation and distribution

Evaluation status Relevant, calculated

Metric tonnes CO2e

416202.9

Emissions calculation methodology

Avery Dennison has partnered with Climate Earth for calculating Scope 3 totals which are relevant to our business. For calculating upstream impacts Climate earth utilizes environmental extended input-output LCA (EEIO). EEIO analysis relies on financial data to make assessments of cradle-to-gate environmental impacts. We utilize the US EPA's model as the basis for calculation. The EPA model has calculated the environmental impacts of industries in the form of impact/dollar. Climate Earth maps a customer's spend by purchase category to these factors to produce an upstream LCA. The result is a complete analysis of the upstream supply chain including analysis by supplier, category, and tier. Impact is calculated by the basic formula of: Activity Data x impact factor = impact So, for example, spend(\$) x impact factor(kgCO2e)\$) = impact(kgCO2e). This includes totals from our RBIS and LGM lines of business.

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

Explanation

Waste generated in operations

Evaluation status Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

Emissions calculation methodology <Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Business travel

Evaluation status Relevant, calculated

Metric tonnes CO2e

13443.3

Emissions calculation methodology This includes totals from our RBIS and LGM lines of business.

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

Explanation

Employee commuting

Evaluation status Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

Emissions calculation methodology

<Not Applicable>

<Not Applicable>

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

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e <Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Use of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

This Scope 3 category does not meet any of the criteria (size, influence, risk, stakeholders, outsourcing, etc.) deemed as relevant under the WRI/WBCSD "Corporate Value Chain (Scope 3) Accounting & Reporting Standard" criteria of "sector guidance" as defined in Table 6.1 based on Avery Dennison's review of operations.

Other (upstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Other (downstream)

Evaluation status

Metric tonnes CO2e

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

Explanation

C-AC6.6/C-FB6.6/C-PF6.6

(C-AC6.6/C-FB6.6/C-PF6.6) Can you break down your Scope 3 emissions by relevant business activity area? No

(C-AC6.6b/C-FB6.6b/C-PF6.6b) Why can you not report your Scope 3 emissions by business activity area?

Row 1

Primary reason

We are planning to include in the next two years

Please explain

Avery Dennison does not currently collect data by business activity area but plans on doing so within the next two years.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization? No

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure? Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

Methodology Please select

Please explain

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

Methodology Please select

Please explain

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities Timber Do you collect or calculate GHG emissions for this commodity? No

Please explain

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 0.00012

Metric numerator (Gross global combined Scope 1 and 2 emissions) 832963

Metric denominator unit total revenue

Metric denominator: Unit total 7159000000

Scope 2 figure used Location-based

% change from previous year 18.61

Direction of change Increased

Reason for change

The stated increase in percent change from the previous year is a result of a 28% year-over-year increase in S1+S2 location-based emissions (numerator), as well as an 8% increase in revenue (denominator). As a result, the intensity value has increased.

C7. Emissions breakdowns

C7.1

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

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
Other, please specify (CO2 / CH4 / N20)	213067	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Asia Pacific (or JAPA)	78040
Europe, Middle East and Africa (EMEA)	53304
Latin America (LATAM)	6501
North America	75223

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)
Corporate (Corp)	0
Industrial and Healthcare Materials (IHM)	83358
Label and Graphic Materials (LGM)	126463
Merger & Acquisition (M&A)	0
Retail Business Information Solutions (RBIS)	3246

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

C7.5

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

				Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Asia Pacific (or JAPA)	280891	271597	269383	269383
Europe, Middle East and Africa (EMEA)	114953	69570	150390	150390
Latin America (LATAM)	18046	18046	33686	33686
North America	206006	144031	169425	169425

C7.6

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

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Corporate (Corp)	0	0
Industrial and Healthcare Materials (IHM)	168147	154022
Label and Graphic Materials (LGM)	337355	252730
Merger & Acquisition (M&A)	0	0
Retail Business Information Solutions (RBIS)	114585	96685

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	116655	Decreased		The majority of our emission reduction activities in 2018 came from renewable energy projects, including 5 low carbon energy purchases, applied globally.
Other emissions reduction activities	8767	Please select		
Divestment		<not Applicable ></not 		
Acquisitions		<not Applicable ></not 		
Mergers		<not Applicable ></not 		
Change in output	106134	Increased		Due to our increase in our production, emissions increased by 106,134 metric tons CO2e. The impacts from our output, combined with our emission reduction activities (listed above) resulted in an overall net decrease of 19,288 metric tons CO2e.
Change in methodology		<not Applicable ></not 		
Change in boundary		<not Applicable ></not 		
Change in physical operating conditions		<not Applicable ></not 		
Unidentified		<not Applicable ></not 		
Other		<not Applicable ></not 		

C7.9b

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

Location-based

C8. Energy

C8.1

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

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	7664	1144673	1152337
Consumption of purchased or acquired electricity	<not applicable=""></not>	127550	387709	515259
Consumption of purchased or acquired heat	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired steam	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of purchased or acquired cooling	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>	<not applicable=""></not>
Consumption of self-generated non-fuel renewable energy	<not applicable=""></not>		<not applicable=""></not>	
Total energy consumption	<not applicable=""></not>	135214	1532382	1667596

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

C8.2c

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

Fuels (excluding feedstocks) Diesel				
Heating value HHV (higher heating value)				
Total fuel MWh consumed by the organization 93393				
MWh fuel consumed for self-generation of electricity 93393				
MWh fuel consumed for self-generation of heat 0				
MWh fuel consumed for self-generation of steam <not applicable=""></not>				
MWh fuel consumed for self-generation of cooling <not applicable=""></not>				
MWh fuel consumed for self-cogeneration or self-trigeneration <not applicable=""></not>				
° °				
<not applicable=""></not>				
<not applicable=""> Comment Fuels (excluding feedstocks)</not>				
<not applicable=""> Comment Fuels (excluding feedstocks) Natural Gas Heating value</not>				
<not applicable=""> Comment Fuels (excluding feedstocks) Natural Gas Heating value HHV (higher heating value) Total fuel MWh consumed by the organization</not>				
<not applicable=""> Comment Fuels (excluding feedstocks) Natural Gas Heating value HHV (higher heating value) Total fuel MWh consumed by the organization 1029714 MWh fuel consumed for self-generation of electricity</not>				

Μ <Not Applicable>

MWh fuel consumed for self-generation of cooling <Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

Comment

Fuels (excluding feedstocks) Propane Gas

Heating value HHV (higher heating value)

Total fuel MWh consumed by the organization 20623

MWh fuel consumed for self-generation of electricity 0

MWh fuel consumed for self-generation of heat 20623

MWh fuel consumed for self-generation of steam <Not Applicable>

MWh fuel consumed for self-generation of cooling <Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

Comment

Fuels (excluding feedstocks) Wood

Heating value HHV (higher heating value)

Total fuel MWh consumed by the organization 7664

MWh fuel consumed for self-generation of electricity 0

MWh fuel consumed for self-generation of heat 7664

MWh fuel consumed for self-generation of steam <Not Applicable>

MWh fuel consumed for self-generation of cooling <Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

Comment

Fuels (excluding feedstocks) Petrol

Heating value HHV (higher heating value)

Total fuel MWh consumed by the organization 942

MWh fuel consumed for self-generation of electricity 942

MWh fuel consumed for self-generation of heat 0

MWh fuel consumed for self-generation of steam <Not Applicable>

MWh fuel consumed for self-generation of cooling <Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration <Not Applicable>

Comment

C8.2d

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

Diesel

Emission factor

11.99

Unit

kg CO2e per gallon

Emission factor source

Avery GHG Protocol

Comment

Natural Gas

Emission factor

0.1813

Unit

kg CO2e per kWh

Emission factor source

Avery GHG Protocol

Comment

Petrol

Emission factor 8.65

Unit

kg CO2e per gallon

Emission factor source

Avery GHG Protocol

Comment

Propane Gas

Emission factor 5.74

Unit kg CO2e per gallon

Emission factor source Avery GHG Protocol

Comment

Wood

Emission factor 1809.91

Unit kg CO2e per metric ton

Emission factor source Avery GHG Protocol

Comment

C8.2e

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

		-	-	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	216315	0	0	216315
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

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

Basis for applying a low-carbon emission factor Energy attribute certificates, I-RECs

Low-carbon technology type

Wind

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

MWh consumed associated with low-carbon electricity, heat, steam or cooling 11000

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

0

Comment

Avery Dennison made an 11,000 MWh I-REC purchase in Panya, China from a wind resource.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

Metric numerator 95 percent landfill-free

Metric denominator (intensity metric only)

% change from previous year

Direction of change

<Not Applicable>

Please explain

C10. Verification

C10.1

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

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

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5? No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)? No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period? No

C11.3

(C11.3) Does your organization use an internal price on carbon? No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

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

C12.1a

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

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits? Yes

Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-FF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number

MP1

Management practice

Practices to increase wood production and forest productivity

Description of management practice

Avery Dennison works directly with suppliers under a variety of frameworks to encourage certification of sustainable raw materials, thus encouraging practices to increase wood production and forest productivity.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Avery Dennison offers training and educational opportunities to align suppliers with FSC Chain of Custody, FSC Controlled Wood, FSC Recycled, and PEFC Sustainable Forest Management.

Climate change related benefit

Increasing resilience to climate change (adaptation)

Comment

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-FF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?

No

C12.3

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

C12.3b

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

C12.3c

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

Trade association

National Association of PET Container Resources

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The association promotes increased recycled content of PET plastic that offsets extraction of virgin material.

How have you influenced, or are you attempting to influence their position?

We are working with the association to promote the position by creating products that enable food-grade PET recycling so that recycled PET can easily offset virgin PET material.

Trade association

Sustainable Apparel Coalition

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Avery is in alignment with SAC goals as outlined in the SAC's Higg Facilities Module that includes, among other things, energy management systems and GHG reduction.

How have you influenced, or are you attempting to influence their position?

Avery participated on a number of working groups in the SAC and holds a co-chair position on the adoption working group. Through this involvement, we are working to influence the position of the SAC and as an extension, its members.

Trade association

Tag and Label Manufacturers Association Label Initiative for the Environment

Is your position on climate change consistent with theirs? Consistent

Please explain the trade association's position

The associations Label Initiative for the Environment (LIFE) Measurement is required to set goals that lead to change.

How have you influenced, or are you attempting to influence their position?

All of our manufacturing operations are LIFE certified.

Trade association

Association of Postconsumer Plastic Recyclers Design for Recyclability

Is your position on climate change consistent with theirs? Consistent

Please explain the trade association's position

The Design for Recyclability promotes increased recycled content of all plastics and offsets extraction of virgin material.

How have you influenced, or are you attempting to influence their position?

We support this position by creating products that enable clean recycling of plastics (PET and HDPE) which can easily offset the extraction of new materials.

C12.3f

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

The processes that we have in place to ensure all of our direct and indirect activities that influence policy are consistent with our overall climate change strategy are two-fold:

1) We track new and proposed climate change legislation and our engagement with trade associations through Avery Dennison's sustainability and legal affairs organizations.

2) We review these regulations and engagements quarterly with those at Avery Dennison responsible for Sustainability efforts and make recommendations to ensure alignment with our Climate Change strategy.

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).

C13. Other land management impacts

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation? No

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Vice President, Global Corporate Communications	Public affairs manager

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	720000000

SC0.2

SC0.2a

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

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)	
Row 1 US 0536111091		0536111091	

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
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	
Customer base is too large and diverse to accurately track emissions to the customer level	

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.

Avery Dennison is currently revising its emissions allocation methodology for customers, based on our sales value relative to their purchases. We anticipate implementing this allocation approach in the coming year. Additionally, we regularly update and implement a supplier scorecard for our upstream suppliers.

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? Please select

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative? Please select (SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative? Please select

SC4.1

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

Submit your response

In which language are you submitting your response? English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms