

# Carbon Reduction Plan

**Supplier name:** MSD (Merck Sharp & Dohme LLC, Rahway, NJ, USA)

**Publication date:** October 2023

## Commitment to achieving Net Zero

MSD has committed to the Science Based Target initiative (SBTi) to set a science-based Net Zero target for its global operations, in alignment with the Paris Agreement, with a target date no later than 2050.

MSD already holds SBTi-approved Near-Term commitments for Scopes 1,2, and 3 (see below), a prerequisite for companies to set a Net Zero target.

## Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions.

Baseline emissions are the reference point against which emissions reduction can be measured.

|  |   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
|--|---|---|-----------|----------------------------|---------|---|---------|---|---------|---|--------|--|---------|---------------------------------|---------|--|---------|---------------------------------------|-----|--|--------|
| <b>Baseline Year: 2019</b>   |   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Additional Details relating to the Baseline Emissions calculations.</b>   |   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| The 2019 baseline year was selected as the 2019 data set was the latest available during our target setting process. |   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Baseline year emissions: 2019 (Global Emissions)</b>  |   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>EMISSIONS</b>   | <b>TOTAL (tCO<sub>2</sub>e)</b>   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Scope 1</b>   | <b>728,600<sup>1</sup></b>  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Scope 2</b>   | <b>294,600<sup>2</sup></b>  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Scope 3<br/>(Included Sources)</b>  | <b>6,380,500</b><br><i>Our Scope 3 breakdown is as follows –</i>  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
|  | <table border="1"> <tr> <td>Purchased goods and services<sup>3</sup></td> <td>4,827,900</td> </tr> <tr> <td>Capital goods<sup>3</sup></td> <td>329,000</td> </tr> <tr> <td>Fuel and energy-related activities not included in Scopes 1 &amp; 2<sup>4,13</sup></td> <td>220,200</td> </tr> <tr> <td>Upstream transportation and distribution<sup>3</sup></td> <td>240,000</td> </tr> <tr> <td>Waste generated in operations (excluding recycled and composted waste)<sup>5,6</sup></td> <td>18,800</td> </tr> <tr> <td>Employee business travel<sup>7,8,13</sup></td> <td>327,200</td> </tr> <tr> <td>Employee commuting<sup>9</sup></td> <td>243,700</td> </tr> <tr> <td>Downstream transportation and distribution<sup>10</sup></td> <td>124,800</td> </tr> <tr> <td>Use of sold products<sup>11,13</sup></td> <td>600</td> </tr> <tr> <td>End-of-life treatment of sold products<sup>12</sup></td> <td>48,300</td> </tr> </table> | Purchased goods and services <sup>3</sup> | 4,827,900 | Capital goods <sup>3</sup> | 329,000 | Fuel and energy-related activities not included in Scopes 1 & 2 <sup>4,13</sup> | 220,200 | Upstream transportation and distribution <sup>3</sup> | 240,000 | Waste generated in operations (excluding recycled and composted waste) <sup>5,6</sup> | 18,800 | Employee business travel <sup>7,8,13</sup> | 327,200 | Employee commuting <sup>9</sup> | 243,700 | Downstream transportation and distribution <sup>10</sup> | 124,800 | Use of sold products <sup>11,13</sup> | 600 | End-of-life treatment of sold products <sup>12</sup> | 48,300 |
| Purchased goods and services <sup>3</sup>  | 4,827,900   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Capital goods <sup>3</sup>   | 329,000   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Fuel and energy-related activities not included in Scopes 1 & 2 <sup>4,13</sup>                                      | 220,200   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Upstream transportation and distribution <sup>3</sup>  | 240,000   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Waste generated in operations (excluding recycled and composted waste) <sup>5,6</sup>                                | 18,800  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Employee business travel <sup>7,8,13</sup>   | 327,200   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Employee commuting <sup>9</sup>  | 243,700   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Downstream transportation and distribution <sup>10</sup>   | 124,800   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| Use of sold products <sup>11,13</sup>  | 600   |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| End-of-life treatment of sold products <sup>12</sup>   | 48,300  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |
| <b>Total Emissions</b>   | <b>7,403,700</b>  |   |           |                            |         |   |         |   |         |   |        |  |         |                                 |         |  |         |                                       |     |  |        |

## Current Emissions Reporting

| Reporting Year: 2022 (Global Emissions) |   |           |
|---|---|-----------|
| EMISSIONS                               | TOTAL (tCO <sub>2</sub> e)  |           |
| Scope 1                                 | 712,400 <sup>1</sup>  |           |
| Scope 2                                 | 218,800 <sup>2</sup>  |           |
| Scope 3<br>(Included Sources)           | <b>6,787,100</b><br><i>Our Scope 3 breakdown is as follows –</i>                      |           |
|   | Purchased goods and services <sup>3</sup>   | 5,263,100 |
|   | Capital goods <sup>3</sup>  | 423,900   |
|   | Fuel and energy-related activities not included in Scopes 1 & 2 <sup>4,13</sup>       | 230,700   |
|   | Upstream transportation and distribution <sup>3</sup>                                 | 355,200   |
|   | Waste generated in operations (excluding recycled and composted waste) <sup>5,6</sup> | 24,900    |
|   | Employee business travel <sup>7,8,13</sup>  | 270,800   |
|   | Employee commuting <sup>9</sup>   | 119,000   |
|   | Downstream transportation and distribution <sup>10</sup>                              | 87,100    |
|   | Use of sold products <sup>11,13</sup>   | 500       |
|   | End-of-life treatment of sold products <sup>12</sup>                                  | 11,900    |
| <b>Total Emissions</b>                  | <b>7,718,300</b>  |           |

### Emissions reduction targets

Acting on climate change is another way we show how we contribute to a healthier world – because climate change affects the social and environmental determinants of health, such as clean air, safe drinking water, sufficient food and secure shelter. MSD has adopted a set of global environmental sustainability targets to help position our Company to succeed in an increasingly resource-constrained world. These were developed to address the rising expectations of our customers, investors, external stakeholders, and employees regarding the environmental impact of our operations and supply chain.

- Reduce our operational greenhouse gas (GHG) emissions (i.e., Scopes 1 & 2) 46% by 2030, from a 2019 baseline.<sup>15</sup>
- Achieve carbon neutrality across our operations by 2025 (Scopes 1 & 2 emissions).<sup>14</sup>
- Source 100% of our purchased electricity from renewables by 2025.<sup>15</sup>
- Reduce our value chain (Scope 3) GHG emissions by 30% by 2030 from a 2019 baseline.<sup>16</sup>
- MSD has committed to the Science Based Target initiative (SBTi) to set a science-based Net Zero target for its global operations, in alignment with the Paris Agreement with a target date no later than 2050

## Carbon Reduction Projects

### Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the **2019** baseline. The carbon emission reduction from our scope 1 & 2 (market-based) operations equates to **92,000 tCO<sub>2</sub>e**, a **9%** reduction against the **2019** baseline and the below measures will be in effect when performing the contract. In 2022, our Scope 3 GHG emissions decreased as compared to 2021 (171,400 tCO<sub>2</sub>e). While performance was mixed across our reported categories, a decrease in our largest category, Purchased Goods and Services, led to an overall decrease from 2021.

In 2022, 81% of our purchased electricity in the UK was from renewable sources. By 2025, in alignment with our environmental commitments, we will source 100% of our purchased electricity from renewable sources.

Our UK manufacturing locations hold accredited energy management (ISO 50001) and environmental management systems (ISO 14001). To help meet our climate commitments, manufacturing sites have completed the 'Low Carbon Transition Playbook', a tool to help create a site strategy by identifying gaps, uncovering opportunities, and creating a common platform for assessment of levers and resource deployment across a range of sustainability initiatives. Based on the outputs of the Low Carbon Transition Playbook, the UK manufacturing locations have established a Carbon Neutrality Roadmap.

MSD is actively working to reduce the CO<sub>2</sub>e emissions associated with our company vehicles in the UK and globally. Compared to our 2019 baseline, the average emissions (g CO<sub>2</sub>e/Km) of our UK running fleet have reduced by 20%. The average emissions (g CO<sub>2</sub>e/ Km) of new company vehicles ordered in 2022 are 80% lower compared to 2019.

MSD has committed to future consolidation of our London operations, into a new building for both laboratories and offices. In this building, MSD aspires to fit out to a LEED Platinum and BREEAM Outstanding level with Well 2.0 certification. The landlord is also constructing the building shell and core aligned with strict total embedded carbon targets and low energy operational goals as set out in Planning by Camden Council. The building will be electric-only (excluding backup supply), utilizing 100% purchased electricity from renewable sources. MSD also seeks to implement My Green Lab certification in the building for our operations.

For the most up-to-date global progress versus our targets, see our latest [MSD Impact Report 22-23](#)<sup>17</sup>.

### Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard<sup>18</sup> and uses the appropriate Government emission conversion factors for greenhouse gas company reporting<sup>19</sup>.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard<sup>20</sup>.

This Carbon Reduction Plan has been reviewed and signed off by the Managing Director of MSD UK and the head of Global Safety and the Environment and has the endorsement of our Company's Executive Management Team.

**Signed on behalf of the Supplier:***Marc Steinman*

Electronically signed by: Marc Steinman  
Reason: Approval  
Date: Oct 11, 2023 14:22 EDT

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Date: Oct 11, 2023

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Electronically signed by: Benjamin Lucas  
Reason: Reviewed  
Date: Oct 12, 2023 09:00 GMT+1

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Date: Oct 12, 2023

**Footnotes:**

- 1 Global Scope 1 emissions in accordance with the WRI Greenhouse Gas Protocol,
- 2 Global Scope 2 market-based emissions in accordance with the WRI Greenhouse Gas Protocol.
- 3 Based on third-party spend data and an economic input-output model performed by Climate Earth, Inc.
- 4 Emission factors from Argonne National Laboratory's GREET Model were used in conjunction with primary fuel and energy-use data. Does not include purchased cooling water.
- 5 Primary-waste data were used with the U.S. EPA's WARM Model.
- 6 Including recycled and composted waste in these calculations would result in negative emissions in 2018 (-43,700 MT CO<sub>2</sub>e), 2019 (-62,400 MT CO<sub>2</sub>e), 2020 (-48,900 MT CO<sub>2</sub>e), 2021 (-46,300 MT CO<sub>2</sub>e) and 2022 (-57,900 MT CO<sub>2</sub>e).
- 7 Based on primary travel vendor data, employee-reimbursable mileage and UK Defra factors.
- 8 Emissions are based on primary vendor data where available and economic input-output modeling performed by Climate Earth, Inc., using spend data.
- 9 2020-2022 reductions caused by shifts to remote and hybrid working models.
- 10 Emissions were calculated using our "Upstream transportation and distribution" spend data as a worst-case estimate entered into the WRI Quantis tool. We assumed that all "downstream" material would first have been stored, transported and handled "upstream."
- 11 Due to recent acquisitions, we are currently evaluating the applicability of additional products to this category. This category currently includes the impacts of our Animal Health products ENGEMYCIN® (oxytetracycline), NEO SPRAY CAF®(oxytetracyclinum), OXYTETRIN® LA (oxytetracycline) only.
- 12 Calculated assuming that all primary, secondary and tertiary packaging purchased was disposed of by our customers. Packaging material data was used with the U.S. EPA's WARM Model.
- 13 ERM CVS provided limited assurance of Scope 3 emissions comprised of World Resources Institute's Greenhouse Gas Protocol Scope 3 Categories 3, 11 and the primary activity data portion of Category 6 (76,582 MT CO<sub>2</sub>e or 28 percent of the total category), which includes primary vendor and employee reimbursable data. The total reported for Category 6 includes non-primary travel vendor data emissions which were based on our 2022 third-party spend data and an Economic Input-Output Model performed by Climate Earth, Inc. 2021 reimbursable mileage data was used as a proxy for the 2022 calculations.
- 14 Scope 1 emissions are direct greenhouse gas (GHG) emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces or vehicles). Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat or cooling.
- 15 We have defined "purchased electricity" as electricity sourced from external suppliers as well as renewable electricity that was generated and utilized on site, where we retained the renewable attributes or where we have obtained renewable attributes through contract.
- 16 Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain.
- 17 [https://www.msd.com/wp-content/uploads/sites/9/2023/08/MSD-ImpactReport\\_22-23.pdf](https://www.msd.com/wp-content/uploads/sites/9/2023/08/MSD-ImpactReport_22-23.pdf)
- 18 <https://ghgprotocol.org/corporate-standard>
- 19 <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>
- 20 <https://ghgprotocol.org/standards/scope-3-standard>